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ROYAL MEEKER, Commissioner

# **MONTHLY REVIEW**

OF THE

**U. S. BUREAU OF LABOR STATISTICS**

**VOLUME IV—JANUARY, 1917—NUMBER 1**



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BUREAU OF ALCOHOL, TOBACCO & FIREARMS

# MONTHLY REVIEW

1911

U. S. BUREAU OF ALCOHOL, TOBACCO & FIREARMS

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## CONTENTS.

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Social Insurance Conference, by Royal Meeker, Commissioner of Labor Statistics .....	1-5
Convention Proceedings of the American Federation of Labor.....	5-10
American Uniform Boiler Code Conference.....	10, 11
Industrial conciliation and antistrike legislation relating to public utilities in various countries.....	11-19
Conference on labor disputes and public service corporations.....	19-25
Occupational accidents resulting in death in Washington, D. C., January 1 to November 25, 1916.....	25, 26
Conciliation work of the Department of Labor.....	27
Federal employment work of the Department of Labor, October and November, 1916.....	27-30
Work of State and municipal employment offices in the United States and of provincial employment bureaus in Canada.....	30-34
Employment in selected industries, November, 1916.....	34-38
Employment in the State of New York in November, 1916.....	38, 39
Strikes and lockouts, January to November, 1916.....	39-43
The Hart, Schaffner & Marx labor agreement.....	43-45
Proposed reclassification of civil service employments in New York State.....	45-47
Retail prices of food in the United States, October and November, 1916.....	47-51
Increase of prices of commodities in Great Britain.....	51-56
Food of munition workers in Great Britain.....	56, 57
South Carolina's bureau of marketing, by John G. Herndon, jr.....	58-63
Vocational training of girls in New York.....	63-66
Vocational guidance in Germany and Great Britain.....	66-75
Maternal mortality in connection with childbirth.....	75-84
Death rates and average age at death among members of certain trade-union benefit funds.....	84-91
Diseases of occupation and vocational hygiene.....	92-94
Work of the Joint Board of Sanitary Control, New York City.....	94-97
A nonpoisonous dope for airplanes.....	97, 98
Anthrax in New York State.....	98-102
Miner's phthisis on the Witwatersrand, Transvaal.....	102-105
Elementary first aid for the miner.....	106, 107
Workmen's organizations in local antituberculosis campaigns.....	107-111
Recent reports relating to workmen's compensation and accident insurance:	
Illinois.....	112-115
Iowa.....	115-119
Pennsylvania.....	119, 120
Rhode Island.....	120-122
Massachusetts Homestead Commission.....	122-127
Some recent housing literature.....	127-130
Industrial Housing at the Twelfth Annual Convention of the American Civic Association.....	130-133
Social insurance in Germany: Statistics of operation, 1914.....	133-135

**Employment conditions in foreign countries:**

Canada.....	136, 137
France.....	137, 138
Germany.....	138-146
Great Britain.....	146, 147
Netherlands.....	148
Norway.....	148, 149
Sweden.....	149
Washing facilities and baths for munition workers in Great Britain.....	150, 151
Eight-hour law in Ecuador.....	151, 152
Proposed creation of public State subsidized employment offices in Italy ...	152-155
Immigration in October, 1916.....	155, 156
<b>Official publications relating to labor:</b>	
United States.....	156-164
Foreign countries.....	164-171
<b>Recent unofficial publications relating to labor.....</b>	<b>171-176</b>

# MONTHLY REVIEW

OF THE

## U. S. BUREAU OF LABOR STATISTICS

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### THE CONFERENCE ON SOCIAL INSURANCE.

BY ROYAL MEEKER, COMMISSIONER OF LABOR STATISTICS.

The Conference on Social Insurance held in Washington December 5 to 9, inclusive, at the call of the International Association of Industrial Accident Boards and Commissions was much more successful than anybody had dared to hope. The almost universal verdict is that the conference got much farther than the mere statement and clarifying of conflicting and irreconcilable opinions. Most gratifying positive progress was made toward an agreement on the broad principles of social insurance and, in the realm of health insurance at least, even on the more important details.

The most obvious characteristic of the whole conference was the intense interest of those in attendance. Everybody seemed eager to hear everything—to miss nothing presented, either as a paper or in the way of discussion. The chairmen were obliged summarily to declare the sessions adjourned in order to give some time for eating and sleeping in preparation for the next meeting. Even hunger and fatigue, which the economists set down as the primary and most insistent wants of man, were for a week subordinated to the thirst for more knowledge about the tremendously important subject of social insurance.

Of course, the program was overcrowded. The attempt to cover, even in the merest outline, the whole field of social insurance was bound to lead to overcrowding which, in sociological conferences just as in industry, results in long hours, overspeeding, under-feeding, fatigue, and consequent lowered efficiency. If all those presenting leading papers had sent in their addresses when requested by the chairman of the program committee, it would have aided greatly in carrying the program through on time, and the value of

the discussion would have been increased because everyone interested would have been supplied with the written papers in advance. In view of the short time available for completing the program and securing the speakers, I feel well pleased that so many responded on time. It demonstrates beyond a question the feasibility of conducting future meetings as discussions centering around written papers submitted in advance, the writer being given 15 or 20 minutes to expound his views and distribute the emphasis properly throughout his formal paper, the remainder of the time being given to discussion. The value of a conference is in direct ratio to the amount and profitableness of the open discussion from the floor.

The session on "Merits and demerits of different forms of administration of workmen's compensation," Tuesday morning, December 5, while full of most useful and little known information, was almost entirely devoid of the much needed critical element. With few exceptions the writers confined themselves to the merits of their several systems. Time did not permit of any adequate discussion of this topic, but it is doubtful if anybody in the audience possessed both the knowledge and the courage to have pointed out the weaknesses and shortcomings in the administrative systems presented. But it is exactly this kind of constructive criticism which the commissions must get if they are to be kept alive on the job. Unless the compensation commissions keep working to improve their organization and administration as a result of such criticism, they will deteriorate and thus fail to accomplish what the public has a right to expect from them.

The Tuesday afternoon session was in large part what could have been foretold, a wrangling match between the several types of workmen's compensation insurance carriers. The shattered atmosphere was filled with flying fragments of assertions and denials, charges and countercharges, statistical statements and unstatistical panegyrics, motions and emotions. Although feeling seemed tense at times, no heads were broken and all participants seemed to be feeling in good humor when the meeting adjourned for dinner. While the layman (another name for the general public) could make little or nothing out of the discussion as to the merits and demerits of the different methods of carrying insurance which were propounded, it will be most useful to have these conflicting opinions and statements brought together where they can be compared and weighed, one against another. It is not necessarily true that there is one best method of carrying workmen's compensation insurance applicable to all times, places, and conditions. If there is one best method, this discussion will help to reveal it.

The Tuesday evening session was given over to the consideration of the quite technical subject of compensation schedules of awards.



The papers and discussions treated the questions—how wages or earnings of injured employees should be computed for compensation purposes; what percentage of wages or earnings should be granted for total disability; what percentage of total disability should be allowed for specified dismemberments and disabilities; whether compensation should be limited to a certain number of weeks in case of permanent disabilities; and whether rehearings should be held from time to time for the purpose of readjusting the compensation allowances. It is to be hoped that, as one result of this discussion, the State and provincial legislatures will give more careful consideration than they have yet given to the fundamental principles underlying compensation schedules of awards.

The principles of rate making for workmen's compensation insurance and accident prevention were the topics discussed Wednesday morning, December 6. The connection between the insurance rate and the accident rate was brought out, and the importance of preventing accidents rather than compensating injured employees was emphasized. All the accident boards and commissions should do more than they are doing to reduce the number and severity of accidents.

The Wednesday afternoon session was one of the most interesting and profitable of the whole conference, the subjects discussed being medical services and medical and hospital fees under workmen's compensation, and physical examination and medical supervision of employees. Again sharp differences of opinion were expressed, and no doubt it will require many conferences before anything resembling standards can be agreed upon for medical and hospital services to be allowed injured workers.

The physical examination and medical supervision of employees is an especially delicate subject which will require most tactful handling in order to give the employees the medical and hospital care they need without discriminating unfairly against them. The discussion of this topic demonstrated that employers and employees in general are as far apart as the poles as to objects, methods, and results of physical examination and medical supervision. If the potential benefits from such examinations and supervision are to be realized, a system must be worked out which will safeguard the interests and needs of both parties. It was mildly suggested that the whole business of physical examination and medical supervision of employees might of necessity be taken over by the public-health agencies.

The problem of the handicapped man was presented to the conference but there was no time for discussion.

The evening session on Wednesday, December 6, was given over to the consideration of the defects and suggested changes in work-

men's compensation laws. As a major subject under this general topic, occupational diseases were treated in two principal papers. This general topic was big enough to have taken up the whole time of the conference.

Prof. Willard Fisher confined his paper to the defects in the scope of compensation laws, but even so the list was appalling in length. Dr. David L. Edsall's discussion of occupational diseases was a revelation. He made it very clear (1) that the apparent scarcity of occupational diseases is due to the inattention and ignorance of medical men and not, as has been claimed, to the ideal conditions in our factories and workshops; and (2) that while occupational diseases should undoubtedly be included under workmen's compensation laws, such inclusion is not to be thought of for a moment as a substitute for universal health insurance.

Again, it is to be regretted that there was not sufficient time for the adequate discussion of these most valuable contributions. A future conference should devote an entire week to the consideration of the problems here presented. In the meantime let us hope that the problems will be studied thoughtfully.

Thursday, December 7, was taken up by papers and discussions on sickness (health) benefits and insurance. In the forenoon the work of existing agencies for health insurance was presented and discussed vigorously.

In the afternoon and evening the proposed legislation for health insurance was advocated by Dr. John B. Andrews and Dr. Alexander Lambert and opposed more or less flatly by Mr. Grant Hamilton, of the American Federation of Labor, and by Mr. Frank F. Dresser, of the National Association of Manufacturers. Miss Mary Van Kleeck, while favoring universal health insurance, insisted that most careful consideration must be given to the special problems presented by women in industry and that the difficulties due to the high morbidity rate among wage-earning women would be greatly reduced by securing for them living wages and shorter hours of work. Dr. Richard C. Cabot expressed the positive opinion that the speakers did not differ so much as they thought they did—were, in fact, in agreement as to the need for health insurance (except Mr. Frederick L. Hoffman) and differed only as to details.

Invalidity and old-age insurance and pensions were discussed Friday morning, December 8, very sharp differences of opinion being expressed. Mr. William Green, secretary-treasurer of the United Mine Workers of America, spoke emphatically for compulsory health, invalidity, and old-age insurance and pensions, while Mr. Magnus W. Alexander and Mr. John Franklin Crowell were equally emphatic against compulsion.



Maternity benefits and mothers' pensions were the subjects for discussion at the afternoon session, and were very ably presented and discussed. These subjects are foreign to the industrial accident boards and commissions, but constitute very important and very live parts of any complete system of social insurance.

At the evening session President Wilson greeted the delegates and their friends. Hon. William B. Wilson, Secretary of Labor, spoke in favor of the general principle of health insurance, and came out strongly in favor of old-age pensions as the next step in the social-insurance program. Mr. Samuel Gompers, president of the American Federation of Labor, spoke with his usual impressiveness against the principle of compulsion in any scheme of insurance against sickness or unemployment. Mr. George Pope, president of the National Association of Manufacturers, closed the meeting with a paper, in which he differed almost entirely from Mr. Gompers' views.

The closing session on Saturday morning was devoted to unemployment and savings-bank insurance. Mr. Bruno Lasker pointed out the impossibility of any successful system of unemployment insurance in any State in this country until a complete system of employment offices has been established. The discussion had to do with possibilities for reducing unemployment and the turnover of labor rather than with any form of insurance against unemployment.

The operations of the Massachusetts system of savings-bank life insurance was very forcefully explained by Miss Alice H. Grady, and the discussion brought out pretty clearly the possibilities and limitations of this form of insurance which lies on the borderland of social insurance and therefore was included in this program which was intended to include every agency engaged in business in the field broadly designated as the field of social insurance.

Scores of letters have come to me expressing the great interest and worth of the conference. Undoubtedly it accomplished much more than I had thought possible, both in collecting different opinions and in threshing out differences.

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#### CONVENTION PROCEEDINGS OF THE AMERICAN FEDERATION OF LABOR.

The American Federation of Labor, at its thirty-sixth annual convention, held in Baltimore from November 13 to 25, 1916, inclusive, took action on a number of significant resolutions and recommendations of the executive council. The body reported its membership at 2,072,702, organized in 21,711 local unions. There are 111 national

and international unions, 417 local department councils organized in 5 departments, 717 city central bodies, 45 State federations, and 705 local trade and Federal labor unions. The treasurer reported an income for the year ending September 30, 1916, of \$334,275, with expenses of \$315,047. Some indication of the activities of the affiliated organizations is given by the amounts paid out under the social insurance methods prevailing. Thus \$2,264,611 were paid as death benefits; \$63,662 as death benefits, members' wives; \$1,068,609 as sick benefits; \$120,771 as unemployment benefits. Another form of activity is indicated by the report of 1,135 strikes won, 133 compromised, 49 lost, and 305 pending at the time of the report. The cost of these strikes is entered at \$2,708,789, to which should be added \$154,010 given by unions for financial assistance of other unions, the sum of these representing the total amount expended to sustain members on strike during the year.

The report of the executive council touched on a large number of questions which it had had under consideration, giving an account of work done, and making suggestions and recommendations for future action. Above 160 resolutions, covering a wide range of interests, were offered by individuals or forwarded by organizations. Among the subjects of more general importance was that of social insurance, on which the convention, on recommendation of its committee, unanimously adopted the report of the executive council. This report reviewed the activities of proponents of compulsory insurance laws, particularly in New York and in the Federal Congress, concluding with a recommendation that the subject be given greater consideration and extension by the unions, preferably the national and international unions, and that so far as social insurance by State and National Governments is concerned it should be voluntary and not compulsory, if established at all. On the question of forms and methods of social insurance a resolution was adopted declaring against compulsory insurance of any kind and an unalterable opposition to private insurance companies for profit in any kind of industrial, social, or health insurance. A resolution submitted by the joint action of a group of delegates instructing the executive council to prepare and submit to Congress an old-age pension bill, and that State branches take the same action in the various States, was referred to the executive council for investigation and report to the next convention. An earlier report had recommended similar disposition of a resolution calling for a review of old-age pension systems of Great Britain and Germany, the prevailing conditions of those countries being recognized as reasons why it would be impracticable to make binding instructions on this subject. As a concrete instance of the application of this principle a resolution was adopted instructing the president and executive council of the

federation "to use every available means to secure the establishment of a retirement system for Federal civil employees which will not either directly or indirectly cause them to suffer a reduction in wages during employment."

On the subject of workmen's compensation the committee on resolutions commended the executive committee for its "successful effort in establishing a comprehensive compensation law for Federal employees," the law referred to being that known as the Kern-McGillucuddy Act. It was pointed out that it had been found impractical and impossible to secure a "Federal compulsory compensation law covering all industries, or, as far as practicable, within Federal jurisdiction," but further that "the report of our legislative committee shows that there is hope for a comprehensive compensation law for all workers coming under the jurisdiction of the Federal Government." Because electric railways are becoming increasingly interstate in their operations, mention may here be made of a resolution calling for the resumption of the publication by the Federal Census Bureau of statistics of persons killed on street and electric railways.

The safety aspect is conspicuous in the recommendation unanimously adopted that the executive council continue its activities in behalf of the establishment of a bureau of labor safety in the Department of Labor, and especially its efforts to have embodied in the bill for such a bureau a provision covering the subject of vocational diseases.

The subject of the high cost of living naturally received attention, one resolution calling for the creation by Congress of a Federal commission to investigate the subject of speculation in food products and the costs of marketing and transportation, to the end that remedial measures be adopted. Another resolution that was adopted after considerable discussion urged upon Congress the necessity of placing an embargo upon food exports, as far as international or treaty rights permit, until the costs of living are reduced to the normal.

As a means of securing a reduction of costs the executive council was authorized and instructed to appoint an investigating committee to report on methods of productive and distributive cooperation, the investigation to be such as would enable a full report to be drafted, together with a bill for a law governing such activities. Here, again, the concrete suggestion for action related to Federal employees, a resolution being adopted calling attention to the fact that the cost of living had increased since the adjustment of salaries in the classified civil service, and recommending that effort be made to secure for such employees a horizontal increase in pay amounting to at least \$200 per annum, and that an increase of the rates of pay of the employees of the District of Columbia, so as to equalize them



with those of the employees of the Federal Government, be made. The enactment of the Nolan minimum wage bill, fixing \$3 as the minimum wage for persons in the civil employment of the United States after not more than two years' service, was also urged. Another resolution urged equal pay for equal work performed regardless of sex in all employments, particular reference being made to the industrial employment of women due to conditions produced by the war in Europe.

On the subject of the eight-hour workday all workers were urged to concentrate their efforts to secure such workday at the earliest possible time. Three resolutions had been submitted in favor of legislative action to secure the establishment of the eight-hour day, but the specific recommendation for legislative action was not adopted, the question being referred to a special committee to be appointed by the president of the federation. Considerable sentiment in favor of procuring the establishment of such a day either through law or through industrial organization was manifested both in discussion and in the vote, but the resolution as submitted by the committee was adopted by a vote of 126 to 52.

The discussion necessarily involved reference to the so-called Adamson law and the threatened railroad brotherhoods' strike. The subject of the strike was dwelt upon with considerable fullness in the report of the executive council, which also set forth the legislative program of the President of the United States, involving the establishment of a mode of investigation of threatened strikes or lockouts, prior to the making of which such strike or lockout shall be illegal; the report concluded with a recommendation "that this convention take an unequivocal position against compulsory institutions and in favor of the maintenance of institutions and opportunities for freedom." The committee's recommendation that this position be affirmed was unanimously adopted.

Another subject into which the report of the executive council went with considerable fullness was that of antitrust and injunction regulation legislation. Emphasis was placed upon the necessity of securing State legislation "supplementing the freedom and rights established under the Clayton Antitrust Act." The decision of the Massachusetts Supreme Court declaring unconstitutional an anti-injunction law of that State was reviewed and the principles supported by the federation set forth at length. The necessity, from the standpoint of labor, for legislation embodying the basic principle that human labor is not a commodity or article of commerce, involving, if necessary, "a constitutional change to provide for this subject matter or the right for the recall of court decisions," was urged. It was also recommended and unanimously adopted "that

any injunctions dealing with the relationship of employer and employee and based upon the dictum that 'labor is property' be wholly and absolutely treated as usurpation and disregarded, let the consequences be what they may."

Attention was paid to that portion of the report of the executive council which referred to the prevention of the adoption of the so-called Taylor system in Government service, the committee on resolutions reporting satisfaction with the achievements of the officers of the federation and heartily commending the work done by them. This report was unanimously adopted.

A resolution was adopted on the subject of housing, the executive council being instructed to consider legislation providing for the loaning of postal savings funds to municipalities for the building of model homes; also one on the subject of immigration, the passage of the immigration bill which passed the House at the first session of the Sixty-fourth Congress being insisted upon, with proper guaranties for establishing and maintaining the right of asylum.

As bearing upon the same question as that involved in the immigrant-labor supply, a resolution was adopted referring to the executive council the matter of inaugurating a movement for the organization of negro labor brought from the South to northern labor centers "for the purpose of filling the places of union men demanding better conditions."

The subject of the public schools was considered in a resolution which urged a democratic vocational education for the children of the schools, and the popular election of boards of education as a means by which the people retain direct control of the schools. Free text-books are declared to be an essential of genuinely free and democratic public schools; while teachers were held entitled to a right to organize, to a tenure on the basis of merit, to an increase in wages, and an adequate pension system. The convention went on record in favor of industrial education and vocational and trade training, special reference being made in the report of the executive council to the Smith vocational trade training bill now before the Senate of the United States.

Considerable discussion followed the report of the committee recommending nonconcurrence in a resolution protesting against the introduction of military training into the public schools. This recommendation of nonconcurrence was rejected by the convention and the resolution adopted.

The subject of internationalism was dwelt upon at length by the report of the executive council and of a special committee on international relations, particular attention being paid to the Mexican situation, and to an invitation extended by the Laborers' Friendly

Society of Japan for a fraternal recognition on the occasion of its fifth anniversary. Of the former it was said that "the report of the executive council upon this subject contains irrefutable evidence of the potentiality of the organized labor movement as an international influence for humanity, justice, and peace"; while the invitation that the Federation be represented at the meeting of the Japanese Laborers' Friendly Society was referred to the executive council, with expressions of "good will and best wishes for the success of the movement to organize more thoroughly and practically the wageworkers of Japan to bring light in their work and their lives."

Satisfaction was expressed with the friendly relations existing between the American Federation and the Canadian workingmen, as well as with the good spirit that was in evidence between the working people of the United States and those of Latin America.

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#### THE AMERICAN UNIFORM BOILER CODE CONGRESS.

The necessity of uniform and drastic safety rules for the construction and inspection of boilers was brought to national attention through the American Uniform Boiler Code Congress, held at Washington, D. C., December 4 and 5, 1916. The congress was convened under the auspices of the Industrial Commission of Ohio and was the outgrowth of a State boiler inspectors' convention held in Columbus earlier in the year.

Invitations to send official representatives to the Washington conference had been extended to the governors of the several States and to the cities having boiler laws or interested in the subject. In response there were present 34 official delegates, representing 21 States. In addition, there was a number of unofficial delegates representing boiler manufacturers, boiler insurers, and other interested organizations.

The importance of the boiler as a cause of accident was brought out pointedly in the course of the meetings. Statistics were cited showing that there occur yearly in the United States between 400 and 500 deaths, and from 1,000 to 2,000 injuries resulting from boiler accidents, whereas in Germany, where attention has been devoted to the subject of boiler safety for a number of years, the number of such injuries is almost negligible.

It was urged, moreover, that safeguarding against boiler accidents is fundamental to proper safety work. A defective boiler may render abortive all other safety efforts. The provision for machine protection, fire escapes, etc., offers no security against the havoc of an exploding boiler, nor is the danger limited to factories. It is a danger



of constant threat in hotels, offices, and many other classes of buildings.

These dangers can be minimized by proper regulations regarding boiler construction and inspection. The fact was noted that in Ohio during the preceding year there had been 3 deaths from the explosion of inspected boilers as against 15 deaths from boilers that had not been inspected because considered safe.

At present there is the utmost chaos in American legislation and practice as regards boiler safety and inspection. Some few States have codes embodying high standards and provide for careful inspection. Some cities make similar provision, even though there has been no State legislation. But many States have laws of only a very crude character and in others there is no public regulation at all. A boiler may be rejected under the laws of one State as defective and dangerous and be officially approved as safe in another. A worn-out boiler, condemned as unsafe in one State, may be shipped to a State with less stringent laws and there put to full use.

The principal purpose of the congress was to seek agreement on some uniform code of regulations and therefore to work for the adoption of such code by all of the States. After discussion, a resolution was unanimously passed approving the boiler code prepared by the American Society of Mechanical Engineers. This code represents the results of several years' labor on the part of the society, through a special committee, in consultation with technical experts and with those having to do with the construction and practical operation of boilers.

Mr. J. T. Callery, chief deputy of the division of boiler inspection of the Ohio Industrial Commission, acted as permanent chairman of the congress. The principal addresses were made by the following: Hon. T. J. Duffy, member of the Industrial Commission of Ohio; Hon. E. N. Hurley, chairman of the Federal Trade Commission; Dr. F. R. Hutton, of Columbia University; Hon. P. J. McBride, commissioner of labor of Kansas; Prof. L. P. Breckenridge, of Sheffield Scientific School; Mr. J. C. McCabe, chief inspector of city of Detroit; and Mr. Henry Hess, chairman standardization committee of the American Society of Mechanical Engineers.

The proceedings of the congress will be published by the Ohio Industrial Commission.

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#### INDUSTRIAL CONCILIATION AND ANTISTRIKE LEGISLATION RELATING TO PUBLIC UTILITIES IN VARIOUS COUNTRIES.

The following brief summary of the conciliation and antistrike provisions of the laws of various countries is compiled from a pub-

lication of the British Board of Trade on strikes and lockouts,<sup>1</sup> issued in 1912, and a report of the chief inspector of factories of Victoria on the antistrike legislation throughout the Australian States,<sup>2</sup> published in 1915, verified by an examination of the original texts and supplemented by an examination of the more recent legislation. The summary is reproduced here on account of the numerous inquiries for information which have recently come to the bureau.

#### COMMONWEALTH OF AUSTRALIA.

*Legal machinery for the adjustment of disputes.*—Court of conciliation and arbitration, consisting of a president, who is a member of the Federal supreme court and judges of the Federal or a State supreme court, appointed by the president as his deputies. Provision is also made for conciliation committees of equal numbers of employers and employees; assessors representing the parties appointed by the court to advise it and local industrial boards, equally representative of workers and employers, presided over by a judge of the supreme court of the Commonwealth or supreme courts of the States. The procedure is varied. The president of the court may summon parties to a dispute and by conference aim to reach an amicable settlement, or there may be an investigation as the basis of an amicable settlement, or temporary reference of a matter to a conciliation committee or local industrial board. All amicable settlements have the force of a formal award.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—The initiation or continuance of any strike or lockout by any organization or person is prohibited.

*Penalties for enforcement of antistrike legislation.*—Penalty of £1,000 (\$4,866.50) against any person or organization responsible for a strike or lockout.

#### NEW SOUTH WALES.

*Legal machinery for the adjustment of disputes.*—In New South Wales the law is similar to that of the Commonwealth and of Queensland in that there are both an industrial court (which is a superior court and a court of record) and industrial boards for groups of industries or callings, awards by the latter being subject to amendment, variation, or rescission by the court.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts of all kinds are prohibited. An injunction may be issued by the industrial court.

*Penalties for enforcement of antistrike legislation.*—Employer liable to a fine of £1,000 (\$4,866.50); worker liable to a fine of £50 (\$243.33), which is a charge on his wages. If striker was member of a union, it may be held liable for not exceeding £20 (\$97.33) of the penalty. Penalty on union for aiding or instigating strike is £1,000 (\$4,866.50).

<sup>1</sup> Great Britain Board of Trade. *Strikes and Lockouts*. Memoranda prepared from information in the possession of the labor department of the board of trade relating to the text and operation of certain laws in the British dominions and foreign countries affecting strikes and lockouts, with special reference to public-utility services. London, 1912. 162 pp. [Cd. 6081.]

<sup>2</sup> Victoria, Australia. Chief Inspector of Factories. *Report on industrial legislation throughout the Australian States*. Melbourne, 1915. 30 pp.

## QUEENSLAND.

*Legal machinery for the adjustment of disputes.*—Industrial court administered by a judge appointed by the governor in council. Local industrial boards are also created on the application of a prescribed number of employers and employees. The court has jurisdiction over certain classes of cases directly and over others on appeal from industrial boards.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—In the case of public utilities, strikes and lockouts are illegal unless a conference has been held before an industrial judge and proved abortive and unless 14 days' notice has been given after termination of conference and a secret ballot has been taken. In all other cases 14 days' notice must be given and a secret ballot taken.

*Penalties for enforcement of antistrike legislation.*—A fine of £1,000 (\$4,866.50) may be levied on employer or union and £50 (\$243.33) on worker. If worker is member of a union, not to exceed £20 (\$97.33) of the penalty may be levied against the union. Penalties are made a charge on wages and on funds of associations.

## SOUTH AUSTRALIA.

*Legal machinery for the adjustment of disputes.*—The judge of the industrial court brings parties together when any dispute occurs, and may make an award in trades where there is none in force, or may change an existing award. When sitting to make a final adjudication, two assessors, representing the respective parties to the dispute, assist the judge if he thinks fit.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—All strikes and lockouts are illegal.

*Penalties for enforcement of antistrike legislation.*—A fine of £500 (\$2,433.25) may be levied against an association and a similar fine of £500 (\$2,433.25) against a person, or three months' imprisonment. Fine of £20 (\$97.33) or three months' imprisonment for picketing. Fines are made a charge against funds of associations and on wages over and above £2 (\$9.73) a week. An employer who refuses to employ or a worker who refuses to accept work where there is an industrial agreement or award in operation may be fined.

## TASMANIA.

*Legal machinery for the adjustment of disputes.*—Governor appoints wages boards. Determination of wages boards may be suspended by the governor, and the boards are then required to review their action. Appeals may be taken from the wages boards to the supreme court. No provision is made for conciliation.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—All strikes and lockouts in wages boards trades on account of any matter as to which a determination has been reached.

*Penalties for enforcement of antistrike legislation.*—A fine of £500 (\$2,433.25) may be levied against an organization and £20 (\$97.33) against an individual.

## VICTORIA.

No legislation.

## WESTERN AUSTRALIA.

*Legal machinery for the adjustment of disputes.*—The court of arbitration consists of a judge of the supreme court and two representatives from employers and employees, all three being appointed by the governor. No provision is made



for local tribunals, and matters come directly before the court of arbitration or the presiding judge.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts are illegal. An employer can not discharge a worker nor can a worker cease work (1) before a reasonable time has elapsed for matter to be dealt with by the court, or (2) during the time the proceedings in court are pending.

*Penalties for enforcement of antistrike legislation.*—A fine of £100 (\$486.65) may be levied against industrial union or employer, and of £10 (\$48.67) against worker.

#### NEW ZEALAND.

*Legal machinery for the adjustment of disputes.*—A court of arbitration, consisting of three members appointed by the governor to serve for three years; one "judge of the court," to have the tenure, status, and emoluments of a judge of the supreme court; and one each nominated by unions of employers and workmen, respectively. Councils of conciliation, consisting of a conciliation commissioner appointed by the governor for a term of three years, to have jurisdiction within a designated industrial district, and one to three assessors, appointed by the commissioner for the occasion, on the nomination of the parties applying for a conciliation council, a like number to be appointed on the nomination of the respondents. Boards of investigation, appointed by court of arbitration. The procedure is for a council of conciliation, when requested, to attempt to adjust the controversy. Failing in this, the matter may be referred to the court of arbitration, which shall make a determination. Disputes involving workers on the Government railways or affecting more than one industrial district may be brought before the court in the first instance by application of a union of railway employees in the one case and of any party to the dispute in the other.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Under the industrial conciliation and arbitration amendment of 1908, which applies only to cases where an award or an industrial agreement is in force, strikes and lockouts are prohibited.

Under the labor disputes investigation act of 1913, which applies only to cases where there is not an existing award or industrial agreement, notice must be given to the minister, who must refer matter to an industrial commissioner or committee. If no settlement is effected within 14 days from delivery of notice to the minister the labor department conducts a secret ballot, and then 7 days must elapse before cessation of work.

*Penalties for enforcement of antistrike legislation.*—Employer liable to £500 (\$2,433.25) fine and employee to £10 (\$48.67). In the case of public utilities the penalty to the worker is £25 (\$166.66). For encouraging or instigating a strike or lockout the scale of fines is: Worker, £10 (\$48.67); employer or union, £200 (\$973.30). The wages of workers may be attached for fines. Penalty for striking or locking out before notice is given or before expiration of seven days from the secret ballot, £10 (\$48.67) to a worker and £500 (\$2,433.25) to employer. Wages of worker may be attached.

*Remarks.*—At any time during the progress of a strike 5 per cent of the workers concerned may demand a secret ballot on any question relating to the strike.

#### AUSTRIA.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts on public utilities are prohibited.

*Penalties for enforcement of antistrike legislation.*—Union may be dissolved and funds and property seized.

*Remarks.*—Before forming a union the organization must notify the Government authorities and send them a copy of the constitution and by-laws. The authorities may then forbid the formation of the union if they consider it will be dangerous to the State.

#### BELGIUM.

*Legal machinery for the adjustment of disputes.*—Trade-unions of employees of public utilities are permitted under Government supervision. Employees may present grievances or requests to the minister of railways, posts, and telegraph, through official channels.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts prohibited on railroads and in all forms of the public service (railway, postal, telegraph, and telephone service, all of which are under State control).

*Penalties for enforcement of antistrike legislation.*—Imprisonment or fine.

*Remarks.*—There has been no serious strike on Belgian railroads since their establishment. This is due to the fact that positions on the railways are much sought after, because of stability of employment, pensions, and on account of the prestige of being in the Government service.

#### CANADA.

*Legal machinery for the adjustment of disputes.*—The law is administered by the minister of labor, and is under the immediate direction of the registrar of boards of conciliation and investigation appointed by the governor in council. Boards of conciliation and investigation are appointed by the minister of labor, one member being nominated by each party to the dispute and the third by those two. If nominations are not made in due time, the minister appoints on his own motion. Jurisdiction by the minister is obtained by the request of either party for the appointment of a board of conciliation and investigation.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts are illegal in public utilities and mines until after an investigation by a Government board and the publication of its report.

*Penalties for enforcement of antistrike legislation.*—A fine ranging from \$10 to \$100 may be levied on each worker, and from \$100 to \$1,000 on each employer, for each day an illegal strike or lockout continues; also any person who encourages any employer to declare or continue a lockout, or any employee to go or continue on strike, illegally may be fined from \$50 to \$1,000. Penalties are not imposed by the Government but must be enforced by the injured party to the dispute.

*Remarks.*—The object sought in publishing the report of boards of investigation is to enlist the coercive force of public opinion upon the side of the right as found by the board.

#### DENMARK.

*Legal machinery for the adjustment of disputes.*—By a law passed in 1910 provision is made for the appointment of a permanent arbitration court of six members, selected from organizations of employers and employees, with a president and vice president, with qualifications of an ordinary judge. It is the duty of this court to make the parties to a dispute respect any agreement between them. A Government conciliator is appointed for two years.

Whenever a strike or lockout is impending (public notice being compulsory), it is his duty to intervene and attempt to effect a settlement.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes or lockouts are prohibited in cases where court awards or trade agreements are broken. In cases where no trade agreements exist a strike is legal, but public notice must be given before it is started.

*Penalties for enforcement of antistrike legislation.*—Fines.

#### ENGLAND.

*Legal machinery for the adjustment of disputes.*—There is no legal machinery, strictly speaking, for the adjustment of wage disputes on the railways, but effective machinery is in existence which is quasi official, consisting of an agreement between the railroads and their employees, which was originally negotiated by a representative of the board of trade in 1907. It was amended as the result of conferences and the report of a royal commission in 1911. These changes were the outcome of the railway strike in 1911. By this agreement boards are created, with equal representation of railroads and employees, to perform the conciliation work not settled by direct negotiation between the parties. If a settlement can not be reached a neutral chairman or umpire, selected by the conciliation boards from a panel prepared by the board of trade, is called in, and his decision is final.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—No legislation.

*Penalties for enforcement of antistrike legislation.*—No legislation.

*Remarks.*—The adjustment of disputes on other public utilities and in the mining industry is provided for in the conciliation act of 1896. Conciliators or boards of conciliation are appointed by the board of trade. Arbitrators are also appointed on the application of both parties, selected from panels of employers, employees, and "persons of eminence and impartiality" established by the board of trade. For conciliation proceedings the board of trade acts on its own initiative or by the request of either party; for arbitration, on the application of both parties.

#### FRANCE.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—The only qualification as to complete freedom of action in the railway service is that any engineer, fireman, or trainman shall not desert his post during the progress of a journey. Postal employees and employees in shipping service controlled by the Government are prohibited from striking.

*Penalties for enforcement of antistrike legislation.*—Desertion of trains between terminals is punishable with imprisonment ranging from six months to two years. Postal and other civil employees may be dismissed or suffer losses in pay. The monopoly privilege may be withdrawn from the shipping service on which a strike occurs.

*Remarks.*—In all occupations except those mentioned the right of employers and employees to take concerted action in a peaceful manner with a view to cessation of work has been officially recognized since 1884. On October 2, 1910, the National Federation of Railway Employees of France and the Federation of Unions of Railway Engineers and Firemen called a general strike on all the railroads of the country. The Government, using its full authority under military laws, called for a mobilization of the strikers, and ordered them to do military duty for three weeks. Their military duties were specified as the



keeping of the railways under normal working conditions under the orders of their superior officers. This measure defeated the strike, which was called off after six days.

#### GERMANY.

*Legal machinery for the adjustment of disputes.*—Means for enabling railway workers of all groups to bring their requests and grievances to the notice of the authorities have been instituted by all the State railway administrations in Germany under the name of "workmen's committees."

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes and lockouts are practically prohibited on public utilities. There are no specific laws forbidding strikes, but rules and practices of railway and other public utilities administration make strikes impossible. About 90 per cent of the organized railway employees belong to unions, the by-laws of which specifically waive all claim to the right to strike.

*Penalties for enforcement of antistrike legislation.*—No specific penalties for engaging in strikes, but workmen are forbidden to belong to unions which assert the right to strike. All union organizations and by-laws are subject to governmental sanction. The coercive force of the law is found in the fact that a railway employee who engaged in a strike would be dismissed or fail of advancement in his work. Every Government employee looks forward to attaining the status of an "official," and this is practically impossible if he belongs to or is known to sympathize with a trade-union which does not meet with Government approval.

#### HOLLAND.

*Legal machinery for the adjustment of disputes.*—Delegates are selected from different groups of railway employees who are authorized to present the wishes and complaints of railway workers before the managers. Arbitration boards have been established for the enforcement of penalties imposed because of infractions of working rules and conditions.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes in railway service are prohibited.

*Penalties for enforcement of antistrike legislation.*—Imprisonment or fine.

*Remarks.*—Legislation prohibiting strikes was the outcome of a general strike in the Dutch railway service in 1903.

#### ITALY.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes are prohibited in railway and public service.

*Penalties for enforcement of antistrike legislation.*—Fine and loss of employment.

*Remarks.*—Legislation relative to fines and loss of employment would not practically prevent strikes, because of the impossibility of enforcing the law upon so many individuals. The real restraining influence is the power of the Government to call out the reserves and compel strikers to resume work under military law.

#### OTTOMAN EMPIRE.

*Legal machinery for the adjustment of disputes.*—In the case of a dispute relative to wages or working conditions, a conciliation board is organized, composed of six members, three representing employers and three representing em-

ployees. The boards are presided over by an official appointed by the Government. The agreements reached by these boards are enforced by the Government. If the parties to the dispute can not agree, the employees are free to stop work, but nothing must be done by them opposed to freedom of action.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes in public utilities are unlawful until grounds of dispute are communicated to the Government and attempts at conciliation have failed.

*Penalties for enforcement of antistrike legislation.*—Imprisonment or fine.

*Remarks.*—The organization of trade-unions in establishments carrying out any public service is forbidden.

#### PORTUGAL.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Illegal in public utilities until 8 to 12 days' notice has been given, together with a statement as to the causes for a strike.

*Penalties for enforcement of antistrike legislation.*—Loss of employment.

*Remarks.*—In all services, except public utilities, strikes have been expressly permitted since the establishment of the Republic in 1910.

#### ROUMANIA.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes are prohibited in public utilities.

*Penalties for enforcement of antistrike legislation.*—Imprisonment and loss of employment.

*Remarks.*—No employee of a public utility can join a trade-union without the authorization of the Government.

#### RUSSIA.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes are prohibited among employees of public utilities.

*Penalties for enforcement of antistrike legislation.*—Imprisonment and loss of employment. Authorities may arrest or banish strikers without bringing them before a court.

#### SPAIN.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes are illegal in public utilities until five to eight days' notice is given, together with a statement as to the causes of the strike.

*Penalties for enforcement of antistrike legislation.*—Leaders and officials of labor organizations or concerted movements who do not make a declaration as to the causes for a strike are liable to imprisonment.

*Remarks.*—In industries other than public utilities strikes are expressly allowed, provided they are not accompanied by threats or violence.

#### SWITZERLAND.

*Legal machinery for the adjustment of disputes.*—The Canton of Geneva has established a system of conciliation and arbitration. Conciliators are elected directly by the two parties to the dispute. If they can not reach a settlement, recourse is had to an arbitration board under Government auspices. There is no law for the settlement of disputes in the Federal railway service.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—Strikes are prohibited in the Federal railway service and in the Canton of Geneva whenever an industrial agreement or award is broken.

*Penalties for enforcement of antistrike legislation.*—In the Federal service strikers are punishable by fines and cautions. There are no penalties in the Canton of Geneva.

*Remarks.*—There have been no strikes on the railways of Switzerland since their nationalization in 1897.

#### TRANSVAAL.

*Legal machinery for the adjustment of disputes.*—The Transvaal law is administered by a department of labor. Boards of investigation are appointed on the request of either party to a dispute. The board has the power of the supreme court as to securing evidence, etc., but can not make binding orders. Failing the adjustment of a dispute by agreement, the board reports to the minister of labor its recommendations, which are officially published and also given to the newspapers.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—In public utilities, the mining industry, and in any other industry to which the provisions of the act are extended by proclamation, strikes are unlawful until after an inquiry by a Government board and until one month after the publication of the board's report.

*Penalties for enforcement of antistrike legislation.*—Any striker is liable to a fine of £10 to £50 (\$48.67 to \$243.33) a day, and, in default of fine, imprisonment, or imprisonment for 3 months without the option of fine. Anyone encouraging another to strike may be fined £50 to £250 (\$243.33 to \$1,216.63) or 6 months' imprisonment. Any employer declaring a lockout may be fined £100 to £1,000 (\$486.65 to \$4,866.50) a day, or given 12 months' imprisonment.

*Remarks.*—The Transvaal law is based, as regards prevention and procedure, upon the Canadian Industrial Disputes Investigation Act of 1907.

#### UNITED STATES.

*Legal machinery for the adjustment of disputes.*—Law providing for the conciliation and arbitration of disputes on railways which interrupt or threaten to interrupt the business of the employer to the detriment of the public interest, under the administration of a board of mediation and conciliation appointed by the President. The board attempts mediation and conciliation, which failing, the board seeks to procure the submission, through an agreement of the parties, of the dispute to a board of arbitration. Jurisdiction is obtained at the request of either party to a dispute, or the board may proffer its services.

*Conditions under which strikes and lockouts are prohibited or are illegal.*—No legislation by the Federal Government.

*Penalties for enforcement of antistrike legislation.*—No penalties against strikes.

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#### CONFERENCE ON LABOR DISPUTES AND PUBLIC SERVICE CORPORATIONS.<sup>1</sup>

The annual meeting of the Academy of Political and Social Science, held in the city of New York on November 22 and 23, 1916, was devoted to a consideration of the general subject of labor disputes

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<sup>1</sup> The proceedings of the conference will be published early in January by the Academy of Political Science, Kent Hall, Columbia University, New York City.



and public-service corporations, its four sessions being given over, respectively, to a discussion of the following topics: Governmental mediation and arbitration, trades-unions and compulsory arbitration, trades-unions and mediation and conciliation, and recent aspects of labor disputes affecting public service corporations. The program as arranged was not carried out in its entirety, but addresses were made on "Efficiency of Federal mediation," by Hon. William L. Chambers, United States Commissioner of Mediation; "The Canadian industrial disputes act," by Dr. Victor S. Clark, Washington, D. C.; "Compulsory arbitration in Australia and New Zealand," by M. B. Hammond, Ohio State University; "The objections of organized labor to compulsory arbitration," by W. S. Carter, president of the Brotherhood of Locomotive Firemen and Enginemen; "Constitutional aspects of compulsory arbitration," by Thomas I. Parkinson, Columbia University; "A league to enforce peace—industrial peace," by Julius Henry Cohen, New York City; "Mutual aid funds as a means of securing industrial peace," by Miles M. Dawson, New York City. The discussions were participated in by Peter J. Brady, Allied Printing Trades Council, and Paul S. Collier, secretary Chamber of Commerce, Oneonta, N. Y., both of whom spoke on Governmental mediation and arbitration; and by George E. Barnett, John Hopkins University, and E. B. Wheeler, New York City, both of whom spoke on trade-unions and compulsory arbitration.

Commissioner Chambers in reviewing the achievements of Federal mediation, commented upon the lack of uniformity in the laws of various nations enacted for the purpose of preventing strikes, or bringing about the peaceable and orderly settlement of disputes as to wages and working conditions on railroads, and after noting some of the differences in these laws, took up in detail the experience of the United States in this connection, beginning with 1888 when the first law was enacted providing for voluntary arbitration and practically for compulsory investigation of railway wage disputes.

Mr. Chambers expressed the opinion that the time has not yet come when compulsory arbitration should be attempted by legislative enactment, and that it is doubtful whether compulsory arbitration would accomplish the purposes of its enactment.

In discussing the Canadian industrial disputes act, Dr. Clark took for his text the words of the Canadian Deputy Minister of Labor, who in recommending the law now on the statute books of the Dominion, said: "In any civilized community private rights should cease when they become public wrongs." It was pointed out that the Canadian statute is not a compulsory arbitration law, as many think, but that its purpose is limited to forbidding lockouts and strikes that directly affect the public welfare until their causes have been

authoritatively investigated and have been made known to the people, and that it extends only to industries that serve immediately the general public. A brief review of the provisions and the operation of the act was given and mention was made of the proposed amendment that will probably be presented to Parliament at the close of the war. The opinion was expressed that "legislation in this direction is demanded in the United States by the interest of all the people."

Prof. Hammond, in speaking on compulsory arbitration in Australia and New Zealand, presented briefly the results of a first-hand exhaustive study of this principle as affecting labor in those countries. He called attention to the fact that no State that has adopted compulsory arbitration has seen fit to abandon it, and that some States have revised their laws in the direction of making them more comprehensive. In noting the operation of the law in New Zealand where disputes are settled by conciliation councils, Prof. Hammond stated that from January 1, 1901, to March 31, 1915, 694 disputes were dealt with, 466 of which were fully settled in council, while only 98 had to be referred to the arbitration court. "These laws and the awards of the arbitration courts have resulted in the most comprehensive system of industrial regulation which the modern world had ever known prior to the outbreak of the war." Prof Hammond thus concludes:

Whether compulsory arbitration will prove to be a permanent feature of Australasian industrial life is a subject which may well lend itself to debate. That some system of governmental regulation of the wage contract will continue as long as the wage system itself continues seems a safe prediction. At present the regulation by arbitration courts seems the most popular method in Australia. To the observer from outside it seems questionable whether those parts of the laws which prohibit strikes, when no really effective mode of enforcing these prohibitions has been discovered, are likely to persist. As already indicated, however, these provisions have long since ceased to be the significant feature of the arbitration laws and the system as a whole should not be judged solely by its failure to put an end to strikes, even though this was the main purpose which the framers had in mind.

Following Prof. Hammond's paper the general topic was discussed by Peter J. Brady, secretary of the Allied Printing Trades Council, who indicated the attitude of labor toward such legislation as the Canadian industrial disputes investigation act and a similar act in operation in Colorado, which he stated in effect takes away from employees their rights as free men. He believed that the solution of all industrial differences is not in legislation to compel workers to continue employment until such time as the Government mediators get through rendering either an opinion or a legally binding decision, but that it lies in "incorporating in our public schools and colleges a course of study that would carry with it on graduation a conviction that we owe something to one another."

Paul J. Collier, secretary of the Oneonta (N. Y.) chamber of commerce, addressed himself to the same general topic but spoke specifically of compulsory arbitration in Australia and New Zealand. He concluded that "our most feasible means of progress is along the line of mediation rather than arbitration," because "when a difficulty gets to the status where it must be arbitrated, it is frequently too late to do anything effective."

Some of the objections of trade-unions to compulsory arbitration, with special reference to the Adamson law, were presented by W. S. Carter, who opened with a general discussion of the methods of wage payment, and showed how the bonus systems have been applied to railroad work and ways in which they have operated to the disadvantage of the employees. He cited the request of employees in the recent controversy that for men in yard service and all employees engaged in hostler service the rate paid for a 10-hour day should be paid for an 8-hour day, and reviewed the history of events which led up to the threatened strike in September, 1916. The refusal of the men to arbitrate, he stated, was due to a belief that in the past they had not been treated fairly in the selection of arbitrators, to the further fact that "the railroads, because of limitation of authority granted to the managers' committee, excluded from any form of arbitration 75 of the smallest railroads," and also to the fact that "awards are administered entirely by one of the parties to the litigation."

Mr. Thomas I. Parkinson, of the Legislative Drafting Research Fund, Columbia University, in discussing "Constitutional aspects of compulsory arbitration," pointed out that the constitutionality of legislation providing for compulsory arbitration, without amendment of the Constitution, is in doubt. It would practically compel men to work, which the courts have never attempted to do. Whether the thirteenth amendment, forbidding involuntary servitude, prevents making the breach of a labor contract a crime punishable by imprisonment has not been definitely settled by court decisions. A State statute of that nature has been held invalid where the matter involved was the mere quitting of private employment. Where the public welfare enters into consideration, implied qualifications of the amendment must be recognized, otherwise the cases which have been excepted, as of soldiers and seamen, would be included. Compulsory labor on roads has been upheld. Statutes forbidding abandonment of locomotives, and the like, before reaching destination, where life is endangered or the mails delayed, have been in force without question. A refusal to perform particular service, under pretense of quitting, has been enjoined, and compliance enforced by contempt proceedings. It may be reasoned that the striker does not really intend to quit the service, but merely to enforce economic demands. Strikes for unlawful purposes are declared unlawful and enjoined,



and it seems that legislatures may add another purpose to the list of those which are illegal. Therefore the thirteenth amendment does not seem an insurmountable objection to compulsory arbitration. The due process clauses of the fifth and fourteenth amendments would also have to give way before the public interest involved. The public interest would further justify the prohibition of either strikes or lockouts of public employees.

The public is interested in sufficiently long hours and low wages to insure reasonable railroad rates, and also in the welfare of the employees. Adjustment has been left to economic competition, but if the strike is to be prohibited, a fixing of standards by the Government would appear necessary. Hours, wages, etc., might be based upon those prevailing in other industries. This would simply extend the regulation of utilities, and a finding that public interest requires it would probably result in its being held valid. Possibly inducements may be offered to make the parties willing to adopt arbitration voluntarily, as was the case with workmen's compensation. It was concluded that the answer to questions of constitutionality would depend upon the details of proposed schemes; great care and skill is needed in the framing of a statute, in order to make the plan constitutional and desirable.

George E. Barnett expressed the opinion that "a considerable part of the objection on the part of unions to arbitration as a means of settling industrial disputes appears to be closely connected with the character of the norms ordinarily used by arbitration boards on reaching a decision. \* \* \* The trade unionist, therefore, does not regard with favor a wage norm which would allow him no participation in an increasing national product. \* \* \* If it is assumed that in the well-organized trades, where wages are set by collective bargaining, wages generally over considerable periods of time are influenced by the increasing production of wealth, a criterion of wages, dynamic in character, is secured which may be used in conjunction with other criteria to settle wages in arbitrated cases."

Everett P. Wheeler, in discussing the attitude of trades-unions toward compulsory arbitration, gave it as his opinion that the fundamental principle of American freedom is that "every citizen has equal civil rights, and that in order to enforce those rights and prevent anyone from interfering unduly with the rights of his neighbor there should be a tribunal whose business it is to decide peaceably any differences that arise between them, and which has power to enforce its decisions." He denied that involuntary servitude is involved in compulsory arbitration. "That can not be called involuntary servitude into which a man voluntarily enters. Nobody is obliged to become an engineer or a fireman, but if a man voluntarily becomes

an engineer or a fireman, the Government has the power to make him keep his contract." Supreme Court decisions are cited to fortify this position, these decisions being based, declared the speaker, on the grant of power to Congress "to regulate commerce with foreign nations and among the several States." He thought that Congress "should provide a tribunal with power on the one side to fix rates and equipment and on the other side to fix wages, the hours of labor, and conditions of work—in short, to regulate the whole business of transportation."

The topic of the third session, Thursday afternoon, November 23, was "Trade unions and mediation and conciliation." At this session Julius Henry Cohen, of New York City, presented a paper on "A league to enforce industrial peace," in which he reviewed the recent history of industrial controversy, noting in connection with the difficulty of securing harmony between capital and labor, the growing recognition of the principle that the right of the parties involved are subordinate to the public interest, the movement for State regulation of public utilities, the adoption by business men of "commercial arbitration," the adequacy of the law to settle controversies, his statement being that "it is public opinion that dallies," and the attitude of labor and of capital.

His proposal in summing up his paper is "A league to enforce industrial peace made up of all the elements of society—the consumer, the neutral, the worker, and the employer (i. e., the State itself), founded upon the following propositions":

- I. The clear recognition of the moral and legal right of men to organize.
- II. The establishment of tribunals sanctioned by law, whose membership shall be representative of all three parties (employees, employers, and the public).
- III. The creation of fact-gathering machinery to enable such tribunals to determine what is in any given case a "fair and reasonable wage" and what are "fair and reasonable working conditions."
- IV. The clear recognition of the necessity for efficiency and discipline in all industrial organizations.
- V. Opportunity to every worker to secure just redress from arbitrary or oppressive exercise of the employer's functions.
- VI. Opportunity to every employer to secure just redress from arbitrary or oppressive exercise of power by the men.
- VII. The right to appear by his chosen organization or spokesman before all sanctioned tribunals and in all dealings with employers and employees.
- VIII. The registration of all collective agreements.
- IX. A national council, without whose sanction there shall be no concerted cessation of work or closing down of plants, to which any interested party may apply for relief, as it may in public service matters to the Interstate Commerce Commission or the public-service commissions; or, in trade matters, to the Federal Trade Commission.
- X. Such national council to be constituted of members elected from groups of employers and groups of workers and representatives of the public.

XI. In public utilities, clear recognition of the function of the State, as part of the regulation of the service and the rates, to determine what is a reasonable wage and what are reasonable working conditions.

XII. Clear acceptance of the proposition that, adequate machinery being established for the redress of all just grievances, the right to coerce by concerted stoppage of work in all service affecting the public health, safety, or convenience shall be made as obsolete as the duel or as illegal as lynching. (This principle to be applied if and when such machinery is established.)

In his paper on "Mutual-aid funds as a means of securing industrial peace," read at this session, Miles M. Dawson, New York, stated that "Establishment of mutual-aid funds to which employees and employers both contribute, and in the management of which both participate \* \* \* are, as a rule, the most economically and effectively managed of all social insurance institutions, and at their best they excel all others in beneficial features."

It may fairly be claimed as a merit of the establishment fund that it discourages strikes in two ways: First, it discourages striking on trivial grounds, not because the fund is used as a club, but because to quit so desirable employment and to lose so desirable protection on trivial grounds is a foolish thing. Second, the participation of representatives of the employers and of the employees in the management of the fund has accustomed them to confer together concerning matters of mutual interest, to know one another and usually to trust one another. Consequently, when issues arise, the door is likely to be open for conference, rather good-natured than otherwise, even if without result, instead of the usual atmosphere of aloofness, suspicion, distrust, and mutual misunderstanding.

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#### OCCUPATIONAL ACCIDENTS RESULTING IN DEATH IN WASHINGTON, D. C., JANUARY 1 TO NOVEMBER 25, 1916.

There is no law requiring the reporting of occupational accidents in the District of Columbia. There is, therefore, no record of any kind of the nonfatal accidents, and the number of fatal accidents is obtainable only through the records of the coroner's office. An examination of the coroner's records by the United States Bureau of Labor Statistics shows, according to the accompanying table, that 36 occupational accidents resulting in death occurred between January 1 and November 25 of the present year, equivalent to a rate of 39 for the entire year.

The number of persons employed in the District of Columbia during the present year is not known, but the figures of the Census of 1910 may be taken as an approximation. Upon this basis these 39 fatalities give a rate of 0.28 per 1,000 employees, corresponding to what is believed to be a conservative estimate of the rate for the manufacturing industries of the country as a whole. If the number of nonfatal accidents bears the same relation to the number of fatal accidents in Washington as has been found to prevail in industry



generally, these fatalities indicate the occurrence also of more than 500 nonfatal occupational accidents to Washington wage earners, causing a disability of over four weeks.

It is worthy of note that the so-called "nonhazardous" employments appear conspicuously in the following table of fatalities, trade with 2 deaths and domestic service with 3, while railroads contributed 7 and construction 8, and the last would probably be increased if full information was available as to the miscellaneous employments.

None of the occupational fatalities here reported was covered by a workmen's compensation act, as only employees of the Federal Government are so protected in the District of Columbia.

OCCUPATIONAL ACCIDENTS RESULTING IN DEATH, WASHINGTON, D. C., JAN. 1 TO NOV. 25, 1916.

Industry and occupation.	Cause of accident.	Age.	Sex.	Race.	Conjugal condition.
<b>Construction:</b>					
Tile setter.....	Caught in elevator.....	51	M.	W.	M.
Ironworker.....	Fall from building.....	56	M.	W.	W.
Carpenter.....	do.....	52	M.	W.	M.
Laborer.....	do.....	43	M.	W.	S.
Do.....	Struck by piece of iron.....	38	M.	C.	M.
Do.....	Struck by piece of metal.....	50	M.	C.	M.
Do.....	Struck by piece of timber.....	41	M.	W.	M.
Do.....	do.....	35	M.	C.	M.
<b>Transportation:</b>					
Engineer, R. R.....	Fall from engine.....	55	M.	W.	M.
Fireman, R. R.....	Run over by engine.....	27	M.	W.	S.
Do.....	Run over by train.....	30	M.	W.	M.
Brakeman, R. R.....	do.....	21	M.	W.	S.
Laborer.....	Jumped from engine.....	30	M.	W.	W.
Do.....	Struck by engine.....	26	M.	W.	S.
Clerk.....	Struck by autotruck (Washington Terminal).....	24	M.	W.	S.
<b>Manufacturing:</b>					
Printing press.....	Caught under press while cleaning it.....	17	M.	W.	S.
Oiler.....	Caught in machinery.....	23	M.	W.	S.
Laborer.....	Struck by plank while operating saw.....	31	M.	W.	S.
<b>Trade:</b>					
Salesman.....	Fall on floor.....	47	M.	W.	S.
Clerk.....	Ammonia poisoning (explosion of tank).....	35	M.	W.	M.
<b>Service, domestic:</b>					
Domestic.....	Explosion of coal-oil stove (filling when lighted).....	45	F.	C.	M.
Waitress.....	Fall down steps.....	36	F.	C.	M.
Waiter.....	Struck in abdomen by broom handle in own hands.....	55	M.	C.	M.
<b>Miscellaneous:</b>					
Watchman.....	Fall from ladder.....	47	M.	W.	M.
Do.....	Asphyxia (defective gas stove).....	72	M.	W.	S.
Gas-meter inspector.....	Asphyxia (accumulation of gas in pit).....	26	M.	W.	M.
Lineman, telegraph.....	Shock and fall from pole.....	22	M.	W.	S.
Subscription agent, newspaper.....	Thrown from automobile.....	37	M.	W.	M.
Laborer.....	Caving in of sand bank (digging trench).....	43	M.	C.	M.
Do.....	Fall down elevator shaft.....	15	M.	W.	S.
Do.....	Fall from dredge (drowned).....	40	M.	C.	W.
Do.....	Fall from cart.....	16	M.	C.	S.
Do.....	Fall from wagon.....	42	M.	C.	M.
Do.....	Fall under autotruck.....	25	M.	C.	S.
Do.....	Run over by autotruck.....	27	M.	C.	M.
Do.....	Kicked by mule.....	46	M.	C.	M.

### CONCILIATION WORK OF THE DEPARTMENT OF LABOR, NOVEMBER 16 TO DECEMBER 15, 1916.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between November 16 and December 15 in four labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, NOV. 16 TO DEC. 15, 1916.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Controversy, Illinois Central R. R. Co. and its maintenance-of-way employees, Chicago, Ill.			Pending.
Strike, Specialty Silk Co., Morris Run, Pa.	32		Adjusted.
Strike, teamsters, stable helpers, etc., Geo. B. Newton Coal Circuit (26 yards), Philadelphia, Pa.	85	Over 300.	Do.
Strike, New Cornelia Copper Co., Ajo, Ariz.	1,500		Pending.

Cases noted as pending in previous statements have been disposed of as follows:

A. J. Cameron & Co., Philadelphia: Strikers returned to work.  
 Machinists, Youngstown, Ohio: Adjusted.  
 Shopmen, New York, Ontario & Western R. R.: Adjusted.  
 Phoenix Knitting Works, Milwaukee, Wis.: Unable to adjust.  
 Machinists, Carolina, Clinchfield & Ohio Railway Co., Erwin, Tenn.: Unable to adjust.  
 Arizona Copper Co.: Adjusted.

### FEDERAL EMPLOYMENT WORK OF THE DEPARTMENT OF LABOR.

During October, 1916, the Division of Information of the Bureau of Immigration of the Department of Labor placed 19,044 persons in employment, as compared with 17,169 during September, 1916. Incomplete returns for November—reports from the important office in Seattle and its subbranches not having been received in time to be tabulated—show a total of 12,117 persons placed during the month. The operations of the different offices throughout the country, by

## 28 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

months, since May, 1915, when fuller reports began to be made, are contained in the statement following:

OPERATIONS OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION  
DURING THE MONTH OF MAY, 1915, TO NOVEMBER, 1916.

Year and month.	Number of applications for help.	Number of persons applied for.	Number of applicants for places.	Number referred to employment.	Number actually employed.
1915.					
May.....	638	3,826	12,132	3,752	3,495
June.....	1,249	3,601	14,530	5,131	4,646
July.....	1,160	8,665	18,061	6,360	6,035
August.....	1,279	7,931	17,827	7,321	6,757
September.....	1,201	4,551	13,334	5,671	5,405
October.....	1,104	5,423	12,215	5,460	5,006
November.....	847	4,650	11,908	4,459	4,146
December.....	698	3,588	11,902	2,622	2,170
1916.					
January.....	933	5,063	15,015	4,300	3,419
February.....	1,423	6,413	14,257	5,036	4,185
March.....	3,443	10,209	19,484	8,113	7,030
April.....	3,805	12,104	13,498	8,843	7,653
May.....	4,918	21,326	17,614	12,938	11,453
June.....	4,826	17,402	18,824	13,839	11,960
July.....	5,488	23,657	24,058	17,608	16,309
August.....	6,420	26,791	23,720	18,062	16,313
September.....	8,312	27,185	26,276	19,643	17,169
October.....	10,552	27,985	28,504	21,789	19,044
November.....	5,878	16,869	17,345	14,622	12,117

The following statement of the work of the 18 different zones covering the whole country gives details for October and November, 1916:

SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE  
MONTHS OF OCTOBER AND NOVEMBER, 1916.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.
1. Boston, Mass.....					50	51	5	6	5	6
Portland, Me.....	1		1				1		1	
Total.....	1		1		50	51	6	6	6	6
2. New York, N. Y.....	148	99	343	587	1,063	970	499	561	450	427
Buffalo, N. Y.....	160	130	1,104	1,869	1,181	930	1,150	991	986	803
Total.....	308	229	1,447	2,456	2,244	1,900	1,649	1,552	1,436	1,230
2a. Newark, N. J. <sup>1</sup> .....	1,819	1,469	2,929	2,505	3,423	2,572	2,556	2,180	1,854	1,610
Orange, N. J.....		220		235		110		102		85
Jersey City, N. J.....	50	80	548	511	313	413	195	341	163	257
Total.....	1,869	1,769	3,477	3,251	3,736	3,095	2,751	2,623	2,017	1,952
3. Philadelphia, Pa.....	119	114	468	530	266	295	245	286	182	223
Pittsburgh, Pa.....	33	22	412	86	788	865	512	466	461	402
Wilmington, Del.....	21	14	70		52	61	60	67	51	42
Total.....	173	150	950	616	1,106	1,221	817	819	694	667
4. Baltimore, Md.....	153	125	217	176	240	214	164	160	160	160
5. Norfolk, Va.....	13	10	281	243	110	170	45	92	24	45

<sup>1</sup> Tentative assignment as a zone, pending permanent organization as a zone.



## SUMMARY OF ACTIVITIES OF UNITED STATES EMPLOYMENT SERVICE FOR THE MONTHS OF OCTOBER AND NOVEMBER, 1916—Concluded.

Zone number and office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.
6. Jacksonville, Fla.....	1	.....	500	.....	21	87	.....	19	.....	19
Miami, Fla.....	9	7	19	9	45	58	16	10	15	6
Savannah, Ga.....	3	2	50	35	129	79	36	36	36	21
Charleston, S. C.....	1	1	1	50	62	12	44	5	44	5
Mobile, Ala.....	.....	.....	.....	.....	6	6	.....	.....	.....	.....
Total.....	14	10	570	94	263	242	96	70	95	51
7. New Orleans, La.....	82	46	100	56	348	184	168	147	39	27
Gulfport, Miss.....	.....	.....	.....	.....	63	43	.....	10	.....	9
Memphis, Tenn.....	2	.....	15	.....	39	.....	17	.....	.....	.....
Total.....	84	46	115	56	450	227	185	157	39	36
8. Galveston, Tex.....	10	9	61	110	27	24	10	14	7	6
Houston, Tex.....	3	2	3	2	26	6	1	.....	1	.....
Amarillo, Tex.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eagle Pass, Tex.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Albuquerque, N. Mex.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Total.....	13	11	64	112	53	33	11	14	8	6
9. Cleveland, Ohio.....	7	15	11	60	91	78	82	66	31	16
10. Chicago, Ill.....	318	448	1,820	2,202	1,885	2,263	1,757	2,141	1,730	2,101
Detroit, Mich.....	379	153	1,047	1,099	951	762	949	762	891	729
Sault Ste. Marie, Mich.....	1	3	25	40	44	37	35	23	33	23
Indianapolis, Ind.....	111	178	583	427	407	623	401	430	377	347
Total.....	809	782	3,475	3,768	3,287	3,685	3,142	3,356	3,031	3,200
11. Minneapolis, Minn.....	19	12	22	15	28	36	10	10	9	10
12. St. Louis, Mo.....	265	270	647	492	378	384	365	323	354	298
Kansas City, Mo.....	847	579	2,689	1,495	2,215	1,393	2,024	1,744	1,679	1,462
Total.....	1,112	849	3,336	1,987	2,593	1,777	2,389	2,067	2,033	1,760
13. Denver, Colo.....	4	18	43	18	23	77	8	21	2	19
14. Helena, Mont.....	.....	.....	.....	.....	3	5	.....	.....	.....	.....
Moscow, Idaho.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	.....	.....	3	5	.....	.....	.....	.....
15. Seattle, Wash.....	144	.....	624	.....	1,041	.....	254	.....	219	.....
Aberdeen, Wash.....	12	.....	280	.....	361	.....	63	.....	63	.....
Bellingham, Wash.....	15	.....	84	.....	103	.....	37	.....	29	.....
Colfax, Wash.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Everett, Wash.....	5	.....	18	.....	9	.....	4	.....	2	.....
North Yakima, Wash.....	2,460	.....	3,250	.....	2,076	.....	2,044	.....	1,883	.....
Spokane, Wash.....	114	.....	169	.....	1,518	.....	157	.....	155	.....
Tacoma, Wash.....	580	.....	1,418	.....	1,731	.....	1,418	.....	1,401	.....
Walla Walla, Wash.....	98	.....	190	.....	132	.....	118	.....	102	.....
Sumner, Wash.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Puyallup, Wash.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wenatchee, Wash.....	51	.....	187	.....	198	.....	158	.....	151	.....
Total <sup>1</sup> .....	3,479	.....	6,220	.....	7,169	.....	4,253	.....	4,005	.....
16. Portland, Oreg.....	1,507	962	5,720	1,566	4,260	2,042	4,114	1,602	3,908	1,521
Astoria, Oreg.....	58	43	344	126	366	452	189	130	184	122
Total.....	1,565	1,005	6,064	1,692	4,626	2,494	4,303	1,732	4,092	1,643
17. San Francisco, Cal.....	425	345	616	790	1,320	1,146	776	588	457	325
Reno, Nev.....	52	12	192	81	178	76	178	77	178	76
Total.....	477	357	808	871	1,498	1,222	954	665	635	401
18. Los Angeles, Cal.....	1	4	1	8	80	103	1	9	1	6
San Diego, Cal.....	451	486	883	1,446	854	715	923	1,203	726	909
Total.....	452	490	884	1,454	934	818	924	1,212	727	915
Grand total.....	10,552	5,878	27,985	16,869	28,504	17,345	21,789	14,622	19,044	12,117

<sup>1</sup> Reports from this zone for November were not received in time to be included in this table.

The above data do not include the activities of the United States Employment Service in cooperation with State and city employment offices. The data relating thereto are shown in the following table:

**ACTIVITIES OF THE UNITED STATES EMPLOYMENT SERVICE IN COOPERATION WITH STATE AND MUNICIPAL EMPLOYMENT OFFICES, OCTOBER AND NOVEMBER, 1916.**

Office.	Opportunities received.				Applications for employment.					
	Applications for help.		Persons applied for.		Applications received.		Referred to employment.		Number actually employed.	
	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.	Oct.	Nov.
New York, N. Y., in cooperation with:										
State office.....	1,757	1,722	2,495	2,388	1,325	1,181	2,694	2,522	1,601	1,477
City office.....	2,977	2,820	3,304	3,166	2,528	2,269	4,311	4,197	2,138	2,545
Buffalo, N. Y., in cooperation with State office.....	905	922	1,015	1,171	1,208	704	1,085	1,074	594	669
Total.....	5,639	5,464	6,814	6,725	5,061	4,154	8,090	7,793	4,333	4,691

**WORK OF STATE AND MUNICIPAL EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT BUREAUS IN CANADA.**

Data are presented in the following table for November, 1915, and November, 1916, relative to the operations of public employment offices. Information is given for the United States for State employment bureaus in 13 States, municipal employment bureaus in 8 States, State-city employment bureaus in 2 States, and a city-private employment bureau in 1 State. Figures are also furnished for 2 Canadian employment bureaus.

**OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, NOVEMBER, 1915 AND 1916.**

**UNITED STATES.**

State and city.	Applications from employers.	Persons asked for by employers.	Persons applying for work.		Persons referred to positions.	Positions filled.
			New registrations.	Re-newals.		
California (municipal):						
Berkeley—						
November, 1915.....	129	147	108	482	147	147
November, 1916.....	243	261	94	415	253	253
Sacramento—						
November, 1915.....	(1)	335	87	(1)	335	335
November, 1916.....	(1)	253	60	(1)	253	253
California (State-city):						
Los Angeles <sup>2</sup> —						
November, 1915.....	(1)	(1)	2,166	(1)	(1)	3,599
November, 1916.....	2,622	4,298	2,060	(1)	4,611	4,042
California (State):						
Oakland—						
November, 1916.....	706	953	510	393	984	753
Sacramento—						
November, 1916.....	312	760	490	245	717	637
San Francisco—						
November, 1916.....	1,032	1,941	2,110	817	2,180	1,915
Total:						
November, 1915.....					(1)	4,081
November, 1916.....					38,998	37,853

<sup>1</sup> Not reported.

<sup>2</sup> Includes Los Angeles district, 8 counties.

<sup>3</sup> Including data for State employment offices, which were not established until January, 1916.

## OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, NOVEMBER, 1915 AND 1916.—Contd.

## UNITED STATES—Continued.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Positions filled.
			New reg- istrations.	Re- newals.		
<b>Connecticut (State):</b>						
Bridgeport—						
November, 1915.....	466	(1)	(1)	(1)	(1)	430
November, 1916.....	820	(1)	(1)	(1)	(1)	706
Hartford—						
November, 1915.....	495	(1)	(1)	(1)	(1)	360
November, 1916.....	1,189	(1)	(1)	(1)	(1)	961
New Haven—						
November, 1915.....	426	(1)	(1)	(1)	(1)	316
November, 1916.....	977	(1)	(1)	(1)	(1)	803
Norwich—						
November, 1915.....	130	(1)	(1)	(1)	(1)	122
November, 1916.....	178	(1)	(1)	(1)	(1)	152
Waterbury—						
November, 1915.....	182	(1)	(1)	(1)	(1)	124
November, 1916.....	162	(1)	(1)	(1)	(1)	117
<b>Total:</b>						
November, 1915.....					(1)	1,352
November, 1916.....					(1)	2,739
<b>Illinois (municipal):</b>						
Chicago—						
November, 1915.....	15	244	200	(1)	244	113
<b>Indiana (State):</b>						
Evansville—						
November, 1915.....	123	396	211	164	506	476
November, 1916.....	505	506	114	206	456	494
Fort Wayne—						
November, 1915.....	197	213	177	42	219	211
November, 1916.....	166	238	167	30	197	183
South Bend—						
November, 1915.....	151	356	394	94	324	283
November, 1916.....	235	921	496	76	491	430
<b>Total:</b>						
November, 1915.....					1,049	970
November, 1916.....					1,144	1,107
<b>Iowa (State):</b>						
Des Moines—						
November, 1916.....	30	145	148	44	157	111
<b>Kansas (State):</b>						
Topeka—						
November, 1915.....	41	54	67	15	60	50
November, 1916.....	63	70	98	6	76	64
<b>Kentucky (city-private):</b>						
Louisville—						
November, 1915.....	(1)	123	484	1,158	137	75
November, 1916.....	(1)	238	323	677	258	93
<b>Massachusetts (State):</b>						
Boston—						
November, 1915.....	1,533	1,859	* 1,290	(1)	* 3,274	1,553
November, 1916.....	1,891	2,153	* 1,214	(1)	* 3,389	1,500
Fall River—						
November, 1915.....	101	104	* 8	(1)	* 100	91
November, 1916.....	156	158	* 15	(1)	* 143	132
Springfield—						
November, 1915.....	593	788	* 258	(1)	* 1,003	700
November, 1916.....	953	1,193	* 489	(1)	* 1,484	899
Worcester—						
November, 1915.....	591	727	* 504	(1)	* 1,049	502
November, 1916.....	976	1,256	* 570	(1)	* 1,451	711
<b>Total:</b>						
November, 1915.....					* 5,426	2,846
November, 1916.....					* 6,467	3,242

<sup>1</sup> Not reported.<sup>2</sup> Number who were registered.<sup>3</sup> Number of offers of positions.



# 32 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, NOVEMBER, 1915 AND 1916—Contd.

## UNITED STATES—Continued.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Positions filled.
			New reg- istrations.	Re- newals.		
<b>Michigan (State):</b>						
Battle Creek—						
November, 1916.....	56	194	1 115	(2)	93	93
Bay City—						
November, 1916.....	68	229	1 211	(2)	171	171
Detroit—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	4,608
November, 1916.....	500	5,678	1 5,452	(1)	5,452	5,452
Flint—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	509
November, 1916.....	709	709	1 709	(2)	709	709
Grand Rapids—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	872
November, 1916.....	488	747	1 747	(2)	731	731
Jackson—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	804
November, 1916.....	322	701	1 765	(2)	693	687
Kalamazoo—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	415
November, 1916.....	203	335	1 480	(2)	393	393
Lansing—						
November, 1916.....	47	162	1 172	(2)	153	153
Muskegon—						
November, 1916.....	59	262	1 205	(2)	188	173
Saginaw—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	800
November, 1916.....	146	837	1 714	(2)	714	714
<b>Total:</b>						
November, 1915.....					(2)	8,008
November, 1916.....					9,297	9,276
<b>Minnesota (State):</b>						
Duluth—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	618
November, 1916.....	(2)	(2)	(2)	(2)	(2)	1,181
Minneapolis—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	1,211
November, 1916.....	(2)	(2)	(2)	(2)	(2)	1,951
St. Paul—						
November, 1915.....	(2)	(2)	(2)	(2)	(2)	756
November, 1916.....	(2)	(2)	(2)	(2)	(2)	1,118
<b>Total:</b>						
November, 1915.....						2,585
November, 1916.....						4,250
<b>Montana (municipal):</b>						
November, 1915.....	489	386	300	(2)	380	360
November, 1916.....	300	430	380	(2)	400	390
<b>New York (municipal):</b>						
New York City—						
November, 1915.....	751	915	2,172	(2)	1,229	915
November, 1916.....	2,820	3,166	2,269	(2)	4,197	2,546
<b>New York (State):</b>						
Albany—						
November, 1915.....	273	374	681	253	647	287
November, 1916.....	511	687	551	278	816	449
Brooklyn—						
November, 1915.....	478	710	686	264	826	503
November, 1916.....	1,722	2,388	1,181	577	2,522	1,477
Buffalo—						
November, 1915.....	777	1,254	1,420	552	1,452	635
November, 1916.....	981	2,345	1,599	125	2,096	1,472
Rochester—						
November, 1915.....	649	986	626	128	932	551
November, 1916.....	1,295	1,747	792	335	1,617	922
Syracuse—						
November, 1915.....	428	664	647	151	793	573
November, 1916.....	818	1,206	693	133	1,152	905
<b>Total:</b>						
November, 1915.....					5,879	3,464
November, 1916.....					12,400	7,771

1 Number applying for work.

2 Not reported.

3 Exclusive of offices at Battle Creek, Bay City, Lansing, and Muskegon, opened since November 1915

## OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, NOVEMBER, 1915 AND 1916—Contd.

## UNITED STATES—Continued.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Positions filled.
			New reg- istrations.	Re- newals.		
Ohio (State-city):						
Akron—						
November, 1915.....	(1)	1,569	1,134	2,079	1,488	1,156
November, 1916.....	(1)	2,305	906	1,621	1,783	1,491
Cincinnati—						
November, 1915.....	(1)	1,303	1,678	3,504	1,444	1,138
November, 1916.....	(1)	1,722	1,612	2,247	1,980	1,277
Cleveland—						
November, 1915.....	(1)	6,127	3,129	6,905	4,857	4,138
November, 1916.....	(1)	6,791	2,665	7,249	6,259	5,104
Columbus—						
November, 1915.....	(1)	2,004	1,148	2,424	1,941	1,551
November, 1916.....	(1)	2,275	724	2,446	2,114	1,763
Dayton—						
November, 1915.....	(1)	1,073	927	1,460	985	902
November, 1916.....	(1)	1,013	753	991	914	814
Toledo—						
November, 1915.....	(1)	2,621	1,753	2,642	2,409	2,217
November, 1916.....	(1)	3,197	1,542	2,491	2,567	2,192
Youngstown—						
November, 1915.....	(1)	1,433	812	1,154	1,315	1,048
November, 1916.....	(1)	1,160	612	1,030	1,104	944
Total:						
November, 1915.....					14,439	12,150
November, 1916.....					16,721	13,585
Oklahoma (State):						
Enid—						
November, 1915.....	(1)	(1)	(1)	(1)	(1)	110
November, 1916.....	89	(1)	(1)	(1)	(1)	79
Muskogee—						
November, 1915.....	(1)	(1)	(1)	(1)	(1)	187
November, 1916.....	(1)	(1)	343	(1)	(1)	224
Oklahoma City—						
November, 1915.....	(1)	(1)	(1)	(1)	(1)	257
November, 1916.....	485	(1)	(1)	(1)	(1)	428
Tulsa—						
November, 1915.....	(1)	(1)	(1)	(1)	(1)	298
November, 1916.....	(1)	(1)	844	(1)	(1)	772
Total:						
November, 1915.....					(1)	852
November, 1916.....					(1)	1,503
Oregon (municipal):						
Portland—						
November, 1916.....	761	1,393	520	(1)	(1)	1,285
Pennsylvania (State):						
Altoona—						
November, 1916.....	(1)	83	30	2	21	21
Harrisburg—						
November, 1916.....	(1)	494	300	101	302	255
Johnstown—						
November, 1916.....	(1)	352	71	23	80	67
Philadelphia—						
November, 1916.....	(1)	1,327	933	792	1,393	1,153
Pittsburgh—						
November, 1916.....	(1)	1,239	741	200	754	703
Total:						
November, 1916.....					2,550	2,199
Rhode Island (State):						
Providence—						
November, 1915.....	210	245	169	35	245	245
November, 1916.....	177	208	30	13	208	208
Texas (municipal):						
Dallas—						
November, 1915.....	106	234	<sup>2</sup> 72	(1)	(1)	(1)
November, 1916.....	219	388	<sup>3</sup> 1,060	10	352	300
Fort Worth—						
November, 1915.....	218	251	<sup>4</sup> 552	(1)	266	236
November, 1916.....	124	284	219	26	196	190
Total:						
November, 1915.....					(1)	(1)
November, 1916.....					548	490

<sup>1</sup> Not reported.<sup>2</sup> Formal registrations only.<sup>3</sup> Includes all casual and transient applicants.<sup>4</sup> Number applying for work.

# 34 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, NOVEMBER, 1915 AND 1916—Concl'd.

## UNITED STATES—Concluded.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to posi- tions.	Positions filled.
			New reg- istrations.	Re- newals.		
Virginia (municipal):						
Richmond—						
November, 1915.....	204	352	571	(1)	354	166
November, 1916.....	283	433	365	(1)	524	214
Washington (Federal-municipal):						
Tacoma. <sup>2</sup>						
Washington (municipal):						
Everett—						
November, 1915.....	(1)	(1)	(1)	(1)	(1)	118
November, 1916.....	(1)	(1)	(1)	(1)	(1)	281
Seattle—						
November, 1915.....	1,615	1,992	(1)	(1)	2,195	1,836
November, 1916.....	2,495	4,269	(1)	(1)	4,320	3,948
Spokane—						
November, 1915.....	(1)	(1)	(1)	(1)	841	744
November, 1916.....	2,025	2,614			2,510	2,442
Total:						
November, 1915.....					(1)	2,698
November, 1916.....					(1)	6,671
Wisconsin (State):						
La Crosse—						
November, 1915.....	105	141	<sup>3</sup> 269	(1)	150	125
November, 1916.....	159	115	<sup>4</sup> 231	(1)	145	69
Milwaukee—						
November, 1915.....	1,528	2,678	<sup>3</sup> 2,799	(1)	2,782	1,900
November, 1916.....	3,547	1,600	<sup>4</sup> 3,297	(1)	3,450	2,625
Oskosh—						
November, 1915.....	143	185	<sup>3</sup> 313	(1)	190	155
November, 1916.....	116	106	<sup>4</sup> 204	(1)	106	86
Superior—						
November, 1915.....	418	654	<sup>3</sup> 654	(1)	616	474
November, 1916.....	816	296	<sup>4</sup> 640	(1)	638	540
Total:						
November, 1915.....					3,738	2,654
November, 1916.....					4,389	3,320

## DOMINION OF CANADA.

Quebec (Province):						
Montreal—						
November, 1916.....	301	1,011	<sup>4</sup> 580	(1)	639	529
Quebec—						
November, 1915.....	(1)	63	<sup>4</sup> 196	(1)	(1)	43
November, 1916.....	(1)	100	<sup>4</sup> 90	(1)	(1)	59
Total:						
November, 1915.....					(1)	(1)
November, 1916.....					(1)	588

<sup>1</sup> Not reported.

<sup>2</sup> Figures for this office are carried regularly in the REVIEW under the subject "Federal employment work of the Department of Labor," to which the reader is referred.

<sup>3</sup> Registrations.

<sup>4</sup> Number applying for work.

## EMPLOYMENT IN SELECTED INDUSTRIES, NOVEMBER, 1916.

Returns for November, 1916, indicate that employment in the manufacturing industries in the United States is still, as a whole, on an upward trend. Reports for November, 1916, and the same month in 1915, have been received from 13 industries. Three new



industries have been added—automobiles, leather, and paper. In 10 of the 13 industries more men were carried on the pay rolls November, 1916, than in November, 1915, the increase ranging from 0.4 per cent in woolen manufacturing to 31.0 per cent in automobile manufacturing. Three of the industries report a reduction in the number of employees—cotton manufacturing, cotton finishing, and cigar making. In the last-named industry the reduction is largely due to strikes in November, 1916, in a few establishments. On the other hand, the increase of 14.3 per cent in clothing is due, at least in part, to strikes occurring in November, 1915, in certain shops.

Comparing the pay rolls of November, 1916, with those of a year ago an increase occurs in 12 of the 13 industries. The strike situation caused a reduction of 5.2 per cent in cigar manufacturing.

The following table makes a comparison with a year ago:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER, 1915, AND NOVEMBER, 1916.

Industry.	Estab- lish- ments to which inqui- ries were sent.	Estab- lish- ments report- ing for Novem- ber both years.	Period of pay roll.	Number on pay roll in November—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in November—		Per cent of increase (+) or de- crease (-).
				1915	1916		1915	1916	
Boots and shoes.....	85	60	1 week..	46,605	50,819	+ 9.0	\$610,188	\$715,254	+17.2
Cotton manufacturing.....	89	52	...do.....	55,600	54,512	- 2.0	474,831	549,183	+15.7
Cotton finishing.....	19	15	...do.....	13,627	12,941	- 5.0	142,306	172,882	+21.5
Hosiery and under- wear.....	82	56	...do.....	30,461	32,247	+ 5.9	275,649	326,547	+18.5
Woolen.....	56	44	...do.....	43,016	43,174	+ .4	429,587	530,237	+23.4
Silk.....	64	44	2 weeks..	13,278	13,437	+ 1.2	283,120	303,797	+ 7.3
Men's ready-made clothing.....	88	38	1 week..	20,321	23,235	+14.3	281,531	331,452	+17.7
Iron and steel.....	142	97	½ month	128,091	154,496	+20.6	4,313,773	6,065,891	+40.6
Car building and re- pairing.....	80	34	...do.....	43,766	49,393	+12.9	1,321,673	1,706,293	+29.1
Cigar manufacturing...	107	59	1 week..	22,398	19,236	-14.1	237,776	225,513	- 5.2
Automobile manufac- turing.....	74	36	...do.....	52,171	68,370	+31.0	898,806	1,292,863	+43.8
Leather manufactur- ing.....	46	32	...do.....	14,946	17,474	+16.9	175,808	252,849	+43.8
Paper making.....	72	44	...do.....	14,505	17,406	+20.0	191,456	259,539	+35.6

In addition to the data presented in the above table, 75 establishments in the iron and steel industry report 116,493 persons as actually working on the last full day of the reported pay period in November, 1916, as against 97,273 for the last full day of the reported pay period in November, 1915, an increase of 19.8 per cent. In the industry of car building and repairing, 32 establishments report 41,381 persons as employed on the last full day of the reported pay period in November, 1916, as against 35,972 in November, 1915, an increase of 15 per cent. Returns as to this item from other industries were not sufficient in number to warrant presentation.

Reports from 8 clothing establishments show \$24,426 paid for contract work in November, 1916, as against \$19,620 in November, 1916, an increase of 24.5 per cent.

The next table shows an increase in November, 1916, over October in 8 of the 10 industries making returns, the increase in employees being as high as 3.9 per cent in boots and shoes, with a very decided increase in wages paid by this industry of 14.7 per cent. Silk and cigars only show a decrease. The decrease in cigars was explained above. Returns were not obtained for October for automobiles, leather, and paper.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN OCTOBER, 1916 AND NOVEMBER, 1916.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for October and November.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (—).	Amount of pay roll in—		Per cent of increase (+) or decrease (—).
				October, 1916.	November, 1916.		October, 1916.	November, 1916.	
Boots and shoes .....	85	62	1 week..	49,491	51,408	+3.9	\$630,792	\$723,571	+14.7
Cotton manufacturing..	89	50	...do....	53,714	54,229	+1.0	517,330	542,677	+ 4.9
Cotton finishing .....	19	14	...do....	10,644	10,911	+2.5	127,691	131,969	+ 3.4
Hosiery and underwear	82	54	...do....	30,657	30,975	+1.0	295,509	314,094	+ 6.3
Woolen .....	56	42	...do....	38,418	38,672	+ .7	441,700	475,117	+ 7.6
Silk .....	64	41	2 weeks..	12,597	12,417	-1.4	293,702	290,978	- .9
Men's ready-made clothing.	84	34	1 week..	19,998	20,127	+ .6	276,882	287,267	+ 3.8
Iron and steel .....	142	97	1 month..	146,012	149,209	+2.2	5,861,898	5,989,676	+ 2.2
Car building and repairing.	80	29	...do....	42,063	43,140	+2.6	1,384,852	1,500,961	+ 8.4
Cigar manufacturing...	107	55	1 week..	18,056	17,371	-3.8	198,458	197,078	- .7

Supplementary to the information in the above table 90 establishments in the iron and steel industry report 122,881 persons as actually employed on the last full day of the reported pay period in November, 1916, as against 120,577 for the last full day of the reported pay period in October, 1916, an increase of 1.9 per cent. In the industry of car building and repairing 27 establishments report 35,758 persons as employed on the last full day of the reported pay period in November, 1916, as against 34,805 in October, 1916, an increase of 2.7 per cent. For reasons stated above like figures can not be given for other industries.

#### CHANGES IN WAGE RATES.

The omission of reference to any of the industries listed in the above tables indicates that no changes have been reported. Many establishments failed to answer the inquiry as to wage-rate changes during the month, and in such cases it is probably safe to assume that no change in rates was made.

In the cotton-manufacturing industry one establishment reports an average increase of 5 per cent to practically all employees; another

an increase of 5 per cent to 90 per cent of the force; two establishments report increases of 5 per cent to all; and two report increases of 10 per cent to all; an increase of 10 per cent is also reported by one establishment that does not state the proportion of the force receiving the increase; a 12 per cent increase is reported by one establishment in the spinning room and part of the card room; two establishments report a reduction of hours from 58 to 54 with no reduction of weekly earnings, making an increase of 7.4 per cent in wages per hour. Eight woolen mills report a like reduction of hours from 58 to 54, with an equivalent increase of wages per hour of 7.4 per cent. In the silk industry one establishment reports an increase of 5 per cent to  $1\frac{1}{2}$  per cent of the force. In the hosiery and underwear industry an increase of 5 per cent to all is reported by two establishments, and an increase of 10 per cent to all by one establishment.

In one shoe factory there was an increase of 6 per cent to 40 per cent of the force, and in another an increase of 10 per cent to 15 per cent of the force.

In the industry of cigar manufacturing, two establishments report an increase of 5 per cent to all; an increase to all of from  $7\frac{1}{2}$  to 10 per cent is reported by one establishment; one establishment reports an increase of 10 per cent to all; in another establishment a 10 per cent increase is given to 50 per cent of the force; about one-third of the force are reported as receiving a 15 per cent increase by one establishment; and an increase of 20 to 25 per cent to strippers, according to grade, is reported by one establishment.

In the iron and steel industry, a 1 per cent increase to one-third of the force is reported by one establishment; an increase of  $2\frac{1}{2}$  per cent to tonnage men is reported by another establishment; while the same rate of increase is given to men covered by the amalgamated scale, about 20 per cent of the force, in still another establishment; and tonnage men get an increase of  $2\frac{3}{4}$  per cent in one establishment.

In the car building and repairing industry an increase of  $1\frac{1}{2}$  cents an hour is reported by one establishment. An increase of 6 per cent to certain groups, and 2 cents an hour to painters is reported in one plant; the combined increases in the last listed establishment cover about 90 per cent of the force. In the industry of automobile manufacturing, one establishment reports an increase of 5 per cent to 90 per cent of the force, while another reports a change in rate for overtime of time and a half instead of time and a quarter for overtime after 9 hours.

In leather manufacture, one establishment reports an increase of 5 per cent in some departments; another of 10 per cent to all; another of 11 per cent to all, while still another gave an increase of 11 per cent to 90 per cent of the force. In one establishment three new rates were applied, 10 per cent of the force got a 5 per cent increase,



4 per cent got a 20 per cent increase, and 4 per cent got a 25 per cent increase.

### EMPLOYMENT IN THE STATE OF NEW YORK IN NOVEMBER, 1916.

A statement issued by the New York State department of labor reads as follows:

A new high peak in manufacturing activity was attained in New York State in November, 1916. The total number of workers employed and the total aggregate of wages paid were greater than in any other month in which these records have been kept, dating back to June, 1914. From October to November, the number of employees increased 2 per cent and the aggregate of wages 4 per cent. Seven of the eleven industrial groups had more employees and paid out more wages than in October. In two groups only were there decreases in both employees and wages. The maximum decrease in any group, for either employees or wages was 2 per cent. These results are shown by returns to the bureau of statistics and information of the State industrial commission from 1,500 representative firms with over 500,000 employees and a weekly pay roll of over \$8,000,000.

As compared with November, 1915, each group employed more workers and paid out more wages. The increase in the total number of employees was 13 per cent and in the total aggregate of wages 28 per cent. As compared with November, 1914, the increase in employees was 29 per cent and in wages 58 per cent. The average weekly earnings of the total number of employees reporting in November, 1916, were \$15.17 as compared with \$14.93 in the previous month. The average weekly earnings were \$13.47 in November, 1915, and \$12.32 in November, two years ago.

The stone, clay, and glass products group reported 2 per cent fewer employees and 1 per cent less wages than in October. The decrease occurred chiefly in the miscellaneous stone and mineral products industry. As compared with November, 1915, the group as a whole had one-fifth more workers and paid out two-fifths more wages. In the metals, machinery, and conveyances group, there was an increase of 4 per cent in employees and of 5 per cent in wages from October to November. Large increases were reported in the manufacture of iron and rolling mill products, of firearms, tools, and cutlery, of cooking, heating, and ventilating apparatus, and of machinery. In the manufacture of brass and copper goods there was slightly decreased activity. As compared with November, 1915, there were one-fourth more employees and nearly one-half more wages.

The wood manufactures group established a new high record in November with 2 per cent more employees and 6 per cent more wages than in the preceding month. As compared with one year ago, there were one-fourteenth more employees and one-fifth more wages paid. The furs, leather, and rubber goods group attained a new high level of activity in November. The increase over October was 3 per cent in employees and 8 per cent in wages. As compared with November, 1915, there were in the group as a whole one-eighth more workers and one-fourth more wages were paid. The chemicals group reported a nominal reduction in number of employees as compared with October, but paid out 3 per cent more wages. As compared with one year ago, one-fifth more workers were employed and one-third more wages were paid. The printing and paper goods group reported a negligible decrease in number of employees in November as compared with October, but paid out 2 per cent more in wages.

The textiles group in November employed 3 per cent more workers than in October and paid out 4 per cent more wages. Increases were noted in the manufacture of cotton yarn and cotton goods. As compared with November, 1915, one-twentieth more workers were employed and one-sixth more wages were paid. The clothing, millinery, and laundering group had a negligible reduction in number of employees in November and 1 per cent reduction in amount of wages paid. Men's clothing and men's shirts each reported a gain over October, but a decrease of 17 per cent in women's clothing and a similar decrease in millinery counteracted these gains. As compared with November, 1915, there were 2 per cent more employees and one-tenth more wages paid. The food, liquors, and tobacco group employed 3 per cent more workers and paid out 5 per cent more wages than in October. This was a new high record for wages in this group and the greatest number of employees since October, 1914. The greatest increases over October were in the manufacture of confectionery and tobacco products. There were 4 per cent more employees and one-sixth more wages paid in the entire group than in November, one year ago. The water, light, and power industry employed 2 per cent more workers and paid out 5 per cent more wages than in October.

### STRIKES AND LOCKOUTS, JANUARY TO NOVEMBER, 1916.

According to data compiled from various sources by the United States Bureau of Labor Statistics, the number of strikes and lockouts during the first 11 months of the year 1916 was 3,134. The number similarly compiled during the corresponding months of the year 1915 was 1,147.

The following table shows the number of strikes and lockouts begun in each of the months of 1916, together with 313 strikes and lockouts reported as having occurred during the 11-month period, although the month in which they began was not reported. The number of strikes compiled during the corresponding months of the year 1915 is also given. In comparing these figures it must be borne in mind that, although the number of strikes in 1916 has undoubtedly been larger than those of the corresponding months of 1915, the sources of the bureau in obtaining data in regard to strikes have also increased, and the difference between the two years is therefore not so great as the figures would tend to show. The strikes and lockouts were distributed as follows:

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO NOVEMBER, INCLUSIVE, 1916 AND 1915.

Kind of dispute.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Month not stated.	Total.
Strikes:													
1916.....	146	162	217	314	492	261	258	265	216	238	152	294	3,015
1915.....	50	45	75	91	111	54	95	138	147	104	109	.....	1,019
Lockouts:													
1916.....	7	5	8	14	15	16	3	9	12	9	2	19	119
1915.....	13	12	14	16	11	6	14	9	15	8	10	.....	128
Total:													
1916.....	153	167	225	328	507	277	261	274	228	247	154	313	3,134
1915.....	63	57	89	107	122	60	109	147	162	112	119	.....	1,147

The above columns include disputes that began in the month indicated only and are subject to monthly revision. More detailed accounts of the disputes reported for each month preceding November may be found in former numbers of the REVIEW.

#### DISPUTES REPORTED DURING NOVEMBER, 1916.

The number of strikes reported during November shows a decrease from the number reported during any month since last January. Probably the strikes that attracted the most attention were those of the cigar makers in Chicago and in Tampa, Fla., and of the coal miners in Pennsylvania and Oklahoma. Other strikes of prominence were those of the longshoremen in Providence; cigar makers in New Haven, Philadelphia, and Wheeling; rubber workers in Woonsocket and Bristol, R. I.; telephone girls in Toledo; window cleaners in Newark; silk weavers in Pawtucket, R. I., and South Manchester, Conn.; weavers in Chattanooga; spinners in Fall River; boiler makers in Brooklyn and Cleveland; steam fitters in St. Louis; piano workers in Chicago; and diamond cutters and butchers in New York City.

The data in the following table relate to 281 strikes and lockouts concerning which information was received by the bureau during the month of November. These include, in addition to the 154 strikes and lockouts which began in November, 117 strikes and 10 lockouts which were reported during November but began as follows: Fifty-three strikes and 4 lockouts in October; 8 strikes in September; 5 strikes in August; 2 lockouts in June; 1 strike in May; 1 lockout in April; and 50 strikes and 3 lockouts, the dates of commencement of which were not reported, but most of which probably occurred in October or November. Inasmuch as strikes which start toward the end of a month frequently do not come to the attention of the bureau until after the report for the month has been prepared, it is probable that corrected figures for November will show an increase over the number of strikes herein reported for that month. Of the disputes reported during November, 202 strikes and 9 lockouts occurred east of the Mississippi and north of the Ohio and Potomac Rivers; 41 strikes and 2 lockouts west of the Mississippi; and the remaining 26 strikes and 1 lockout in the district south of the Ohio and Potomac Rivers and east of the Mississippi. Over one-half of these strikes occurred in five States.



STATES IN WHICH FOUR OR MORE STRIKES AND LOCKOUTS WERE REPORTED  
DURING NOVEMBER, 1916.

States.	Strikes.	Lockouts.	Total.
Pennsylvania.....	51	1	52
New York.....	29	1	30
Ohio.....	21	1	22
Rhode Island.....	20	.....	20
Illinois.....	18	2	20
Massachusetts.....	17	1	18
Connecticut.....	14	.....	14
New Jersey.....	12	.....	12
Indiana.....	7	2	9
Wisconsin.....	7	.....	7
Missouri.....	6	.....	6
Alabama.....	5	.....	5
Tennessee.....	5	.....	5
California.....	4	.....	4
Florida.....	4	.....	4
Maryland.....	4	.....	4
Michigan.....	4	.....	4
Nebraska.....	4	.....	4
Texas.....	4	.....	4
18 other States.....	33	4	37
Total.....	269	12	281

The strikers were men in all but 16 strikes and 1 lockout, which were confined to women; 12 strikes, which included both men and women; and 25 strikes and 1 lockout, in which the sex was not stated.

The industries in which four or more strikes and lockouts were reported were as follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED  
DURING NOVEMBER, 1916.

Industry.	Strikes.	Lockouts.	Total.
Metal trades.....	62	.....	64
Miners.....	32	.....	32
Building trades.....	22	4	26
Textile workers.....	20	.....	20
Clothing.....	16	1	17
Tobacco workers.....	14	.....	14
Teamsters.....	12	.....	12
Bakers.....	9	1	10
Leather workers.....	6	1	7
Butchers.....	6	.....	6
Telegraph and telephone.....	5	.....	5
Railroad men.....	5	.....	5
Longshoremen.....	4	.....	4
Rubber workers.....	4	.....	4
Street-railway men.....	3	1	4
Miscellaneous.....	49	2	51
Total.....	269	12	281

Included in the above are 22 strikes of machinists, 17 of molders, and 5 each of carpenters, weavers, and electrical workers.

In 167 strikes and 11 lockouts the employees were connected with unions; in 10 strikes they were not so connected; in 7 strikes they

were not connected with unions at the time of striking, but became organized during the course of the strike; in the remaining 85 strikes and 1 lockout it was not stated whether the men had union affiliation.

The following table shows the causes of 196 strikes and 8 lockouts, 73 strikes and 4 lockouts being due to miscellaneous causes or to causes not reported. In 73 per cent of these the question of wages or hours, or both, was prominent.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED DURING NOVEMBER, 1916.

Cause.	Strikes.	Lockouts.	Total.
For increase of wages.....	84	1	85
Because of reduction of wages.....	6		6
For decrease of hours.....	8	1	9
Because of increase of hours.....		1	1
For increase of wages and decrease of hours.....	30		30
General conditions.....	2		2
Conditions and wages.....	6		6
Recognition of the union.....	24	3	27
Recognition and wages.....	8		8
Recognition, wages, and hours.....	3		3
Because of discharge of employees.....	9		9
Because of presence of nonunion men.....	4	1	5
In regard to agreement.....	3	1	4
Sympathy.....	4		4
Want men discharged.....	5		5
Miscellaneous.....	11		11
Not reported.....	62	4	66
Total.....	299	12	281

In 102 of the strikes the number of persons involved was reported to be 64,596, an average of 633 per strike. In 17 strikes, in each of which the number involved was more than 1,000, the strikers numbered 50,700, thus leaving 13,896 involved in the remaining 85 strikes, or an average of 163 in each. In 5 lockouts the number reported to be involved was 232, an average of 46 in each.

In 198 strikes and 7 lockouts only 1 employer was concerned in each disturbance; in 13 strikes, 2 employers; in 2 strikes and 1 lockout, 3 employers; in 3 strikes, 4 employers; in 7 strikes and 1 lockout, more than 4; in 46 strikes and 3 lockouts the number of employers was not stated.

In 87 strikes reported as ending in November, 39 were won, 10 were lost, 27 compromised; in 3 the strikers returned to work under promise of the employer to arbitrate the matter in dispute; in 8 strikes the result was not reported. One lockout was reported as compromised. The duration of 65 of these strikes was given as follows: 1 day, 1; 2 to 3 days, 12; 4 to 7 days, 13; 1 to 2 weeks, 12; 2 to 3 weeks, 6; 3 to 4 weeks, 4; 1 to 2 months, 8; over 3 months, 9. One strike was reported to have lasted 3 years. The duration of the remaining 64 strikes was 1,173 days, or an average of 31 days each; omitting 8 strikes lasting more than 3 months, the duration of the

remaining 56 strikes was 799 days, or an average of 14 days each; the 1 lockout that was reported ended in November had lasted for 30 weeks.

#### THE HART, SCHAFFNER & MARX LABOR AGREEMENT.<sup>1</sup>

On May 1, 1916, the new labor agreement<sup>2</sup> entered into between Hart, Schaffner & Marx Co. and its employees became effective. According to the preamble the parties whose names are signed thereto "purpose entering into an agreement for collective bargaining with the intention of agreeing on wage and working conditions and to provide a method for adjusting any differences that may arise during the term of this contract," which is to continue for three years. Its administrative functions are vested in a board of arbitration and a trade board. The former consists of three members and has full and final jurisdiction of all matters arising under the agreement, and its decisions thereon are regarded as conclusive. The trade board is composed of 10 employees of the company and a chairman "who shall represent the mutual interests of both parties hereto," and "is the primary board for adjusting grievances."

Direct charge of the execution of the provisions of the agreement is placed in the hands of deputies representing each side, who investigate, mediate, and adjust complaints, but whose decisions may be challenged and an appeal taken by either side to the trade board. The union is allowed in each shop a representative who shall be recognized as such and have charge of all complaints and organization matters within the shop. When a complaint arises he is to report it to the superintendent, and if a satisfactory adjustment is not reached the complaint goes to the deputies, who make an earnest attempt to effect a settlement. If they disagree the complaint is filed with the trade board, before which hearings are held. In the event of dissatisfaction with the decision of this board an appeal may be taken by either party to the board of arbitration.

This agreement provides that the hours of labor in the tailor shops shall be 49 per week, with a half holiday on Saturday, and that the minimum wage shall range, according to the work performed, from \$5 per week to \$16 per week, with overtime paid as follows: To pieceworkers, 50 per cent in addition to their piecework rates; to week workers, time and one-half. If a change of piece rates is contem-

<sup>1</sup>Hart, Schaffner & Marx labor agreement, being a compilation and codification of the agreements of 1911, 1913, and 1916 and decisions rendered by the board of arbitration, by J. E. Williams, chairman of the board of arbitration; Sidney Hillman, president of the Amalgamated Clothing Workers of America; and Earl Dean Howard, director of labor for Hart, Schaffner & Marx, Chicago, 1916. 42 pp.

<sup>2</sup>An account of the mediation, conciliation, and arbitration under the labor agreements of Hart, Schaffner & Marx with their employees, 1911 to 1914, may be found in Bulletin No. 198 of the United States Bureau of Labor Statistics.



plated the matter is to be referred to a specially appointed committee, which shall fix the rates.

The principle of the preferential union shop is recognized in the hiring and firing of workers, in the transfer of workers from one shop to another, in relieving overcrowded conditions, and in other ways. While leaving with the company the full power of discharge and discipline, the agreement safeguards the rights of the employees in this connection, assuring to them justice and fair treatment. A discharged employee has the right to appeal his case to the trade board. It is also provided that no union member who is a permanent worker shall be laid off in the tailor shops except for cause, unless such lay off is made necessary by alteration of working periods in slack times, reorganization or reduction of sections, lawful discipline, or by direction of the trade board. Any member absent on account of sickness shall be reinstated if he returns within a reasonable time.

Those who framed the agreement recognized the possibility of serious strain on the loyalty of the parties signing it, and in order to obviate, or at least minimize, the chances of friction certain acts which are to be held as constituting disloyalty to the agreement are suggested.

1. Inciting a stoppage of work or otherwise fomenting dissatisfaction or rebellion following a refusal to submit a complaint to the proper officials and to await an adjustment.

2. Indulging in improper language or conduct calculated to injure or break down the authority of officials in the shops.

3. Discrediting by words or acts the officials of the unions in the shops.

4. Willful violation by a worker of the spirit of the agreement by intentional opposition to its fundamental purposes, and especially if he carries such willful violation into action by striking and inciting to strike.

5. Willful violation of the spirit of the agreement by any representative of the company, especially if he fails to observe or carry out any decision of the trade board or board of arbitration.

The cutting and trimming departments, as well as the tailor shops, are subject to the general provisions of the agreement. Special provisions, however, are applicable to them. With some modification the principles of preference apply. The company shall not reduce the wages of any cutter, but shall increase the wages of those receiving less than \$26 per week. Other increases provided by the agreement are as follows:

All men now on the trimmers' pay roll who are receiving not to exceed \$15 are to be increased \$2 per week. All men receiving a weekly wage of over \$15 and not exceeding \$20 shall receive an increase of \$1 per week, except that apprentice trimmers having been employed less than six months are to receive an increase of \$1 per week.

The following periodical increase shall be granted during the term of this agreement: Men receiving under \$12 shall receive an increase of \$1 per week

every three months until their wages shall be \$12 per week. Men receiving over \$12 and less than \$18 shall receive an increase of \$1 every six months until their wages shall be \$18 per week. Men receiving over \$18 per week and less than \$20 shall receive an increase of \$1 per week every year until their wages shall be \$20 per week.

All men starting to work on the band-saw machines shall receive not less than \$18 per week and shall receive an increase of \$1 per week every six months until their wages are \$20. Thereafter they shall receive an increase of \$1 per week every year until they reach the rate of \$24.

The pamphlet containing the agreement also includes a brief history of the experience of Hart, Schaffner & Marx with collective bargaining, in which it is stated that "a labor department critical of everything touching the interests of the workers, a trade board and a board of arbitration constantly reviewing and discussing policies and methods protect us against ourselves and make it impossible to violate or overlook the rights of employees," and that "arbitration and conciliation should be applied to all departments of a business wherever there is a conflict of interest." Two other articles are included, both reprinted from the Illinois Law Review for March, 1916, the first on "The Development of Government in Industry," by Earl Dean Howard, and the second, "A New Field for Systematic Justice," by Dean John Wigmore, of the Northwestern University Law School. The pamphlet closes with a brief account of how piece rates are made, by the chairman of the trade board.

#### PROPOSED RECLASSIFICATION OF CIVIL SERVICE EMPLOYMENTS IN NEW YORK STATE.

The New York State Senate Committee on Civil Service was appointed early in 1915 to study employment conditions under the State government in order to formulate a basis for the reclassification of positions and the standardization of salaries and grades. On March 27, 1916, this committee transmitted to the legislature its first report<sup>1</sup> which on the whole seems to "furnish convincing evidence that the business of the State is transacted with a considerable amount of waste." As a result of the investigations of the committee the following conditions were found to exist:

1. Irregularity in rates of pay, with large amounts of overpayment. "The extent of overpayment \* \* \* aggregates \$380,082. The amount of underpayment aggregates \$83,050."
2. Multiplicity of fictitious and unnecessary titles, with resultant confusion of work, friction between employees, and administrative difficulties in assigning

<sup>1</sup> New York. First report of the committee on civil service of the Senate of the State of New York, appointed to investigate the civil service of the State with particular reference to salaries, grades, and duties of officers and employees. Transmitted to the legislature Mar. 27, 1916. Albany, 1916. 933 pp.

and controlling the personnel. "There are approximately 943 fictitious or unnecessary titles in the State service to-day."

3. Inadequate and inequitable system of advancement and promotion. "Too little premium is placed upon demonstrated merit, efficiency, or length of service."

4. Unnecessary duplication of work; prevalence of useless positions. Investigations made by the committee "reflect a possible saving in salaries and wages of \$500,635, which can be obtained through immediate force reduction."

5. Lack of proper qualifications and preliminary training of employees.

6. Exempt positions; need for more permanence of tenure in important posts.

7. Lack of standards to control output of employees.

8. Lack of esprit de corps; deadening influence of service under present conditions. "The regulations and customs governing the present departmental procedure are productive of waste."

To overcome these conditions the committee submits recommendations (1) as to the modification of the civil service law so as to include basic standards governing personal service; (2) as to the manner and methods of applying such basic standards to the existing civil service; (3) as to additional legislative and administrative machinery for purposes of civil service control; and (4) as to changes in the practice and procedure of the civil service commission.

As the primary result of the committee's investigation, the report includes a "complete and comprehensive" code of 157 distinct schedules or groups, giving standard specifications of personal service for the State, each schedule prescribing basic conditions governing the appointment, promotion, and compensation of employees engaged in the line of work specified. Under this plan each worker falls into one of the following classifications of service: Executive, managerial, professional and scientific, inspectional, investigational and examining, clerical, educational, institutional, skilled labor, and labor. These classifications are further divided into groups; that is, distinctive lines of employment, and each group is broken up into its natural divisions, according to responsibility and duties, called grades. For each grade the standards or conditions governing employments and standards of ability, experience, or training governing the persons who would fill such employment, are specified.

As respects the manner and method of applying the basic standards proposed the committee suggests the abolishment of unnecessary positions; reorganization of the present system under an arrangement which will extend a substantial and uniform protection to employees who are now overpaid and who will continue to be overpaid under existing departmental conditions, and the elimination of all excess over and above such element of protection; and an adjustment affecting efficient employees who are underpaid.

The committee suggests the appointment of a joint legislative committee on civil service and the establishment of a division of



service records and standards, and believes that changes in the practice and procedure of the civil service commission should be based on two main considerations, (1) conditions surrounding appointment of employees, and (2) conditions surrounding advancement and promotion.

If this plan of the committee is adopted by the legislature, it is estimated that an annual saving of \$181,069, or 8.9 per cent of the present cost, will be effected. It is further estimated that the cost for the clerical service alone will progressively decrease, as a result of the proposed plan, during the next five years, so that in 1921 the saving over existing schedules will be \$463,328, or approximately 22 per cent of the present salaries paid to those in this service.

The committee gave consideration to the present practice in regard to the manner and methods of establishing positions and of recruiting and controlling employees, and found irregularity in compensation for work of similar grade and character, irregularity and rapidity of salary increases and promotions, irregularity of titles for work of similar grade and character, and that unnecessary positions have been established. In this connection a table is given showing by groups the number of distinctive titles and salary rates and the range of compensation under the present and proposed classification. An analysis of problems peculiar to institutional service was made.

The report includes a pro forma bill submitted to the legislature to amend the civil service law in relation to salaries and grade standards, and then devotes 764 pages to reciting the standard specifications of personal service, including standard titles, salaries, duties, definitions, and minimum qualifications. A table is given showing a comparative classification of employments, present and proposed, indicating the present variety of titles and extent of overpayment and underpayment.

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#### RETAIL PRICES OF FOOD IN THE UNITED STATES.

According to reports gathered by the Bureau of Labor Statistics the retail price of the principal articles of food, combined, was 4 per cent higher on November 15, 1916, than on October 15. All beef was slightly lower, ham and bacon prices were practically the same, and pork chops were 5 per cent lower.

There was no change in rice, coffee, and tea. The retail prices of the 16 other principal articles of food reported were higher on November 15 than on October 15; potatoes having made the greatest advance, 21 per cent, eggs and flour each having advanced 13 per cent, navy beans 11 per cent, and lard 10 per cent.

The following table shows the relative prices and the average prices of the principal articles of food on October 15 and November 15, 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD  
ON OCT. 15 AND NOV. 15, 1916.

[The relative price shows the per cent that the average price on the fifteenth of each month was of the average price for the year 1915.]

Article.	Unit.	Average money price.		Relative price (average price for the year 1915= 100).	
		Oct. 15, 1916.	Nov. 15, 1916.	Oct. 15, 1916.	Nov. 15, 1916.
Sirloin steak.....	Pound.....	\$0.273-	\$0.268-	107+	105+
Round steak.....	do.....	.246-	.239-	108-	105+
Rib roast.....	do.....	.212	.210	106+	105-
Chuck roast.....	do.....	.172+	.169+	107-	105-
Plate boiling beef.....	do.....	.129-	.128-	106-	105+
Pork chops.....	do.....	.240-	.228-	118+	112-
Bacon, smoked.....	do.....	.303+	.303+	111-	111+
Ham, smoked.....	do.....	.302+	.302+	117	117+
Lard, pure.....	do.....	.194-	.213+	131+	144+
Hens.....	do.....	.244-	.241+	117+	116+
Salmon, canned.....	do.....	.206	.210	103-	105+
Eggs, strictly fresh.....	Dozen.....	.449-	.506-	134-	151-
Butter, creamery.....	Pound.....	.421+	.439+	117-	122-
Cheese.....	do.....	.268-	.291+	116+	126-
Milk, fresh.....	Quart.....	.095+	.099	106+	110-
Bread.....	16-oz. loaf <sup>1</sup> .....	.065+	.068+	115+	120-
Flour, wheat.....	4-barrel bag.....	1.234+	1.395-	123+	139-
Corn meal.....	Pound.....	.034-	.036+	108+	116+
Rice.....	do.....	.091-	.091-	100+	100+
Potatoes.....	Peck.....	.424-	.511+	185-	223-
Onions.....	Pound.....	.047-	.051-	136-	143+
Beans, navy.....	do.....	.121-	.135-	157+	175+
Prunes.....	do.....	.133-	.135+	100-	102-
Raisins, seeded.....	do.....	.131-	.137-	104-	109+
Sugar, granulated.....	do.....	.032-	.036+	124+	131-
Coffee.....	do.....	.302-	.302-	100-	100-
Tea.....	do.....	.551+	.551+	100+	100+
All articles combined.....				119+	124+

<sup>1</sup> 16 ounces, weight of dough.

The table below shows the relative prices and the average prices of the same articles of food for November 15 of each year from 1912 to 1916:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD  
ON NOV. 15 OF EACH YEAR, 1912 TO 1916.

[The relative price shows the per cent that the average price on the 15th of November in each year was of the average price of the year 1915.]

Article.	Unit.	Average money price Nov. 15.					Relative price Nov. 15 (average for the year 1915 = 100).				
		1912	1913	1914	1915	1916	1912	1913	1914	1915	1916
Sirloin steak.....	Pound.	\$0.235 -	\$0.253 -	\$0.253 -	\$0.255 +	\$0.268 -	92 -	99 -	99 +	100 -	105 +
Round steak.....	do.	.198 -	.225 +	.232 +	.225 +	.239 -	87 +	99 +	102 +	99 +	105 +
Rib roast.....	do.	.186	.198	.202	.200	.210	93 +	99 -	101 +	100 -	105 -
Chuck roast.....	do.			.166 -	.159 +	.169 +			103 -	99 +	105 -
Plate boiling beef.....	do.			.128 -	.120 +	.128 -			105 -	99 -	105 +
Pork chops.....	do.	.197 +	.215 +	.220 -	.209 +	.228 -	97 -	106 +	108 -	103 -	112 -
Bacon, smoked.....	do.	.255 +	.276 -	.287 -	.279 -	.303 +	97	101	105 -	102 -	111 +
Ham, smoked.....	do.	.251 -	.266 -	.271 +	.266 -	.302 +	97 -	103 -	105 -	103 -	117 +
Lard, pure.....	do.	.160 -	.160 -	.157 -	.145 -	.213 +	108 +	108 -	106 -	98 +	144 +
Hens.....	do.	.196 -	.206 +	.206 +	.204 -	.241 +	94 +	99 +	99 +	98 -	116 +
Canned salmon.....	do.				.200	.210				100 +	105 +
Eggs, strictly fresh.....	Dozen.	.442 +	.489 +	.442 +	.452 +	.506 -	132 -	146	132 +	135 -	151 -
Butter, creamery.....	Pound.	.396 +	.389 -	.396 +	.367 +	.439 +	110 -	108 +	110	102 +	122 -
Cheese.....	do.				.231 -	.291 +				100 -	126 -
Milk, fresh.....	Quart.	.091 -	.093 -	.092 -	.091 -	.099	101 -	103 -	102 -	101 -	110 -
Bread.....	16-oz. loaf <sup>1</sup>			.052 +	.056 -	.068 +			92 -	98 +	120 -
Flour, wheat.....	1-bbl. bag	.813 -	.793 -	.893 -	.903 -	1.395 -	81	79 -	89 -	90 -	139 -
Corn meal.....	Pound.	.030 -	.030 +	.031 +	.031 -	.036 +	95 -	96 -	100 +	99 -	116 +
Rice.....	do.				.091 -	.091 -				100 -	100 +
Potatoes.....	Peck.	.231 +	.275 +	.213 +	.250 -	.511 +	101	120 +	93 +	109 -	223 -
Onions.....	Pound.				.033 +	.051 -				96 +	148 +
Beans, navy.....	do.				.084 -	.135 -				109 -	175 +
Prunes.....	do.				.130 +	.135 +				98 -	102 -
Raisins, seeded.....	do.				.126 -	.137 -				100 +	109 +
Sugar, granulated.....	do.	.060 +	.054 +	.062 +	.065 +	.086 +	91 +	82 +	94 +	99 +	131 -
Coffee.....	do.				.302 -	.302 -				100 -	100 -
Tea.....	do.				.551 +	.551 +				100 +	100 +
All articles combined.....							98 +	103 +	104 -	105 -	124 +

<sup>1</sup> 16 ounces (weight of dough).

Considering prices on November 15 of each year from 1912 to 1916, all articles for which prices are shown for the four-year period were higher on November 15, 1916, than on November 15, 1912, from 9 per cent for milk to 72 per cent for flour, and 121 per cent for potatoes.

All articles, excepting rice, coffee, and tea, were higher on November 15, 1916, than on November 15, 1915. Potatoes were 105 per cent higher, navy beans 61 per cent higher, flour and onions each 54 per cent higher, and lard 47 per cent higher. Meats showed less advance, the increase ranging from 5 per cent for sirloin steak and for rib roast to 14 per cent for ham and 18 per cent for hens.

The price of all articles combined was 27 per cent higher on November 15, 1916, than on November 15, 1912; 20 per cent higher than on November 15, 1913; 19 per cent higher than on November 15, 1914; and 18 per cent higher than on November 15, 1915.



## RETAIL PRICES IN NEW YORK CITY.

Both relative and actual average prices, as reported by 26 firms in New York City, are also shown, as follows:

## AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD IN NEW YORK CITY ON NOV. 15, 1915, AND OCT. 15 AND NOV. 15, 1916.

The relative price shows the per cent that the average price on the 15th of each specified month was of the average price for the year 1915.]

Article.	Unit.	Average price.			Relative price (average price for the year 1915=100).		
		Nov. 15, 1915.	Oct. 15, 1916.	Nov. 15, 1916.	Nov. 15, 1915.	Oct. 15, 1916.	Nov. 15, 1916.
Sirloin steak.....	Pound....	\$0.272+	\$0.291+	\$0.283+	101	108+	105+
Round steak.....	do.....	.263-	.281+	.273+	101+	108-	105+
Rib roast.....	do.....	.226-	.239+	.235-	101+	107+	105+
Chuck roast.....	do.....	.168-	.183-	.178-	101+	110-	107-
Plate boiling beef.....	do.....	.153-	.168+	.165+	100-	110+	108+
Pork chops.....	do.....	.216-	.184-	.173+	102-	87+	82-
Bacon, smoked, sliced.....	do.....	.248-	.275+	.273-	99+	110-	109-
Ham, smoked <sup>1</sup> .....	do.....	.193-	.231-	.227+	102+	122+	120-
Lard, pure.....	do.....	.150-	.201-	.219-	97+	132-	142-
Hens.....	do.....	.219-	.264+	.258-	101-	122-	119+
Canned salmon.....	do.....	.231-	.233-	.235+	99+	100+	101+
Eggs, strictly fresh.....	Dozen.....	.524+	.532+	.580+	131-	133-	145+
Butter, creamery.....	Pound.....	.363+	.417+	.449+	101-	116-	125+
Cheese.....	do.....	.234-	.262+	.291-	99+	111-	123-
Milk, fresh.....	Quart.....	.090	.097+	.097+	100	108+	108+
Flour, wheat.....	5-barrel bag.....	.882-	1.240+	1.374-	86+	121+	134+
Corn meal.....	Pound.....	.033+	.038-	.040-	99-	112+	118-
Rice.....	do.....	.092-	.090+	.091-	99+	97+	98+
Potatoes.....	Peck.....	.301+	.532-	.611+	103-	187-	215+
Onions.....	Pound.....	.044-	.057+	.064-	101-	132-	146-
Beans, navy.....	do.....	.091-	.121-	.145-	106+	141-	169-
Prunes.....	do.....	.143-	.144+	.146-	98+	99+	100-
Raisins, seeded.....	do.....	.124-	.126+	.133-	102-	104-	109+
Sugar, granulated.....	do.....	.059-	.075+	.081+	99+	126-	136+
Coffee.....	do.....	.290+	.290+	.290+	100-	100-	100-
Tea.....	do.....	.463+	.463+	.463+	101+	101-	101-

<sup>1</sup> Whole.

In an article appearing in a New York newspaper of Sunday, November 12, it was stated that most table necessities are now 100 per cent higher than a year ago.

Only 1 of the 26 articles here listed, which comprise the principal articles of food, has made such an advance. The prices here shown are compiled from monthly reports furnished to the bureau by representative New York firms. No "fancy" stores are included, nor "special sale" or "cut rate" prices. Potatoes made an advance of 103 per cent between November 15, 1915, and November 15, 1916.

Flour, which the newspaper article says has advanced about 100 per cent in the last year, has advanced but 56 per cent. Potatoes, which are alleged to have gone up more than 100 per cent "in the last four weeks" (presumably dating back from Nov. 11), according to the bureau's reports made but 15 per cent advance from October 15 to November 15. The actual price quoted by the newspaper, however, which was 60 cents per peck, corresponds quite

closely to the average of the prices furnished the bureau for November 15, which was 61.1 cents.

Cheese also was mentioned as having advanced 100 per cent in the last year, although the actual prices quoted by the newspaper—from 18 to 20 cents a year ago to 30 to 35 cents at present—would not be a 100 per cent advance. The bureau's price reports show only a 24 per cent advance.

Other articles which have made considerable advance in the past year are lard, 46 per cent; onions, 45 per cent; and sugar, 37 per cent. But two articles declined in price—pork chops, 20 per cent, and rice, 1 per cent.

Between October 15 and November 15 there was a decline in the price of all meats. Pork chops declined 6 per cent, beef cuts 2 or 3 per cent each, and bacon and ham but 1 and 2 per cent, respectively. Meats, however, were the only articles which were lower in price. Coffee, tea, and milk were the same on November 15 as on October 15, and all other articles were higher on November 15, ranging from 20 per cent for navy beans to but 1 per cent each for salmon, prunes, and rice.

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#### INCREASE OF PRICES OF COMMODITIES IN GREAT BRITAIN.

On September 1, 1916, the average prices of commodities of general consumption in Great Britain had increased approximately 65 per cent over the prices prevailing in July, 1914, just before the outbreak of the war. About 6 per cent of this increase, however, was due to increased duties on tea and sugar, leaving 59 per cent as the result of market conditions. This rise in retail food prices has been broadly continuous since the war began. Clothing materials have advanced from 50 to 90 per cent, and coal, on September 1, 1916, had increased approximately 33 per cent over July, 1914.

These and other facts bearing upon the increase of prices of commodities are set forth in detail in an interim report<sup>1</sup> issued on September 22, 1916, by the British Board of Trade departmental committee, appointed "to investigate the principal causes which have led to the increase of prices of commodities of general consumption since the beginning of the war, and to recommend such steps, if any, with a view to ameliorating the situation as appear practicable and expedient, having regard to the necessity of maintaining adequate supplies." The committee has, in this interim report, concentrated on the correlated problems of meat, milk, and bacon, although a statement of

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<sup>1</sup> Great Britain. Board of Trade. Departmental Committee on Prices. Interim Report on Meat, Milk, and Bacon. London, 1916. 20 pp.

prices in general is included showing, as already indicated, a weighted percentage increase for all articles of consumption of about 59 per cent. It is noted in this connection that increase in rents in general has been prohibited by legislation and that other items of expenditure have not risen on the average so much as food, thus leading the committee to quote the words of the director of the department of labor statistics of the board of trade, who, in September, 1916, said:

It may be estimated that the average increase in the cost of living of the working classes between July, 1914, and the present time, taking food, rent, clothing, fuel and light, and miscellaneous expenditure into consideration, is about 45 per cent, disregarding increased taxation and assuming that the standard of living has not been modified in view of war conditions.

While no figures appear to be available to show the extent to which total earnings (as distinct from rates of wages) have increased since the war began, it is given as a fact that the rates of wages have materially increased, although they have not kept pace with the increase in prices of food and other necessities. It is estimated that during the 25 months ending August 31, 1916, 5,800,000 workpeople<sup>1</sup> were affected by increases in rates of wages, the total increases amounting to £1,480,000 (\$7,202,420).<sup>2</sup> Other factors included greater regularity of employment, additional overtime, nightwork, etc., have added to earnings, so that the committee is forced to the conclusion that—

there is less total distress in the country than in an ordinary year of peace, the majority of the classes which chronically suffer from distress being in unusually regular employment; and that this, together with the higher wages earned by, and greater needs of, so many skilled and unskilled workers employed directly and indirectly in the production of munitions of war, has tended to increase considerably, in some directions, the total demand for food. On the other hand, certain classes normally in regular employment, whose earnings have not risen in the same proportion as the cost of living—for example, the cotton operatives and some classes of day-wage workers and laborers—are hard pressed by the rise in prices, and actually have to curtail their consumption, even though the pressure of high prices may have been mitigated in some cases by the employment of members of a family in munition works and by the opening of better paid occupations to women.

The following table shows the average amount and percentage of increase in prices of certain commodities September 1, 1916, as compared with July, 1914:

<sup>1</sup> Exclusive of salaried officials and clerks, shop assistants, and domestic servants.

<sup>2</sup> It is stated that these figures relate mainly to general changes in the rates of organized bodies of workpeople, and do not cover more than a small minority of the numerous cases of advances granted to a few workpeople by individual employers which escape the notice of the department. War bonuses and advances in rates of wages for the same class of work are included in the figures, but not increases in earnings from other sources.



AVERAGE AMOUNT OF INCREASE AND PER CENT OF INCREASE IN SPECIFIED COMMODITIES IN GREAT BRITAIN, SEPT. 1, 1916, AS COMPARED WITH JULY, 1914.

Article.	Unit.	Average prices.		Increase.	
		July, 1914.	Sept. 1, 1916.	Amount.	Per cent.
Beef, British:		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	
Ribs.....	Pound..	19.8	31.9	12.1	61.6
Thin flank.....	do.....	13.2	23.8	10.6	80.3
Beef, chilled or frozen:					
Ribs.....	do.....	14.7	26.4	11.7	79.6
Thin flank.....	do.....	9.6	19.3	9.7	101.0
Mutton, British:					
Legs.....	do.....	20.8	32.4	11.6	55.8
Breast.....	do.....	13.2	23.3	10.1	76.5
Mutton, frozen:					
Legs.....	do.....	13.7	25.3	11.6	84.7
Breast.....	do.....	8.1	17.7	9.6	118.5
Bacon (streaky).....	do.....	22.8	33.0	10.2	44.7
Flour (households).....	7 lbs.....	21.3	34.5	13.2	62.0
Bread.....	4 lbs.....	11.7	18.3	6.6	56.4
Tea.....	Pound.....	37.5	56.3	18.8	50.1
Sugar (granulated).....	do.....	4.1	11.2	7.1	173.2
Milk.....	Quart.....	7.1	9.6	2.5	35.2
Butter, fresh.....	Pound.....	29.4	43.6	14.2	48.3
Butter, salt.....	do.....	28.4	42.6	14.2	50.0
Cheese (Canadian or United States) <sup>1</sup> .....	do.....	17.7	25.9	8.2	46.3
Margarine.....	do.....	14.7	17.2	2.5	17.0
Eggs, fresh.....	Dozen.....	29.4	53.2	23.8	81.0
Potatoes.....	7 lbs.....	9.6	14.7	5.1	53.1

<sup>1</sup> If this kind is seldom dealt with in a locality the returns quote prices for another kind locally representative.

Taking up the matter of the advance in the prices of meats, milk, and bacon, the committee notes that on September 1, 1916, the retail prices of British meats averaged about 5½d. (11.1 cents) above those of July, 1914, an increase accounted for to a certain extent "in terms of cost of production, which has steadily risen." Thus, in a table showing the prices of foodstuffs and fertilizers, it appears that maize meal, for instance, advanced from £7 10s. (\$36.50) per ton before the war to £11 8s. (\$55.48) per ton in July, 1916; and nitrate of soda, from £10 14s. 9d. (\$52.25) to £18 5s. (\$88.81) per ton in the same period. Another cause given for the increase in the price of meats is the rise in agricultural wages, due to a shortage of labor. In England and Wales the increase in wages has varied between limits of 3s. (73 cents) and 6s. (\$1.46) per week, tending to exceed these amounts in some districts; and in Scotland the usual limits of increase have been 4s. (97.3 cents) to 8s. (\$1.95) or 9s. (\$2.19) per week, the higher amounts predominating. Meat prices have also been affected by the fact that practically all of the imported meats have been used by the forces, leaving a comparatively small supply for the civilian population. Furthermore, imports of mutton from Australia in 1915 were reduced, while the home-grown supply of beef and mutton experienced only a slight increase. The price of imported meats in Great Britain has also been influenced, suggests the committee, by the rise in the f. o. b. price in the country

of origin, involving large profits and the cost of distribution, by an increase of freight rates, and by inadequate transportation facilities.

The committee found that milk prices have advanced since the beginning of the war, and ascribes this increase to the fact that the farmer, being able to secure a higher profit by selling his cows to the butcher or by making cheese, has not been encouraged to give proper attention to the dairying industry, with its long hours of exceptionally trying labor. A number of witnesses testified that had there been no war the London milk price would to-day be 5d. (10.1 cents), "owing to the fact that at 4d. (8.1 cents) per quart, the retailer's margin had been falling for some years, on account of the gradual increase in the price asked by the farmer."

The broad facts are that since 1913 the farmer's price for milk has in general risen about 6d. (12.2 cents) per gallon \* \* \* and the London retailer's price by 4d. (8.1 cents) per gallon, when he sells at 5d. (10.1 cents) per quart, or 8d. (16.2 cents) per gallon when he sells at 6d. (12.2 cents) per quart. \* \* \* While combination among farmers has helped to secure the increased prices, there can be no doubt that an actual increase in demand and increased cost of production have been the main factors. In particular, the increased demand of the producers of margarine, tinned milk, and milk chocolate, together with that of the hospitals, has helped to force up prices. The increased price of cheese has had a similar effect. \* \* \* What appears to be clear is that shortage of labor tends to play a considerable part in restricting supply. The latest reports go to show that for sheer lack of milkers a considerable number of farmers are even now reducing their herds.

Bacon prices, it was found, have advanced about 46 per cent on the average as between July, 1914, and September, 1916, but a view of bacon imports in general for the years 1911 to 1916 shows that prices were rising steadily before the war; that there has been a very great increase in the supply from the United States and Canada—far in excess of the decline in imports from other countries—and that there must have been a great increase in the military and other consumption to absorb the total. It appears that some of this increase in price has been caused by an increase in freight and delivery charges, which in June, 1916, were a little over £16 (\$77.86) per ton as against £2 10s. (\$12.17) per ton in July, 1914. The committee states that "reliable evidence has been given to the effect that quantities of American bacon have been sold in England during the summer at an actual loss to the American packer," and figures are given showing that in July, 1916, the British consumer was getting his bacon from Canada at a price lower than that paid by the consumer in the country of source.

As regards the price of meat, milk, and bacon the committee recommends in substance—

1. That the construction of mercantile ships, especially those required for the conveyance of refrigerated meats, be hastened.

2. That sufficient men be provided to work on the docks and railways in order to avoid congestion of freight.
3. That the Government further restrict the importation of less necessary commodities.
4. That the slaughter of animals in calf, in lamb, and in pig be prohibited.
5. That the embargo on the importation of live cattle from Canada be not disturbed.
6. That the Government develop those sources of supply from which direct purchases of meat may be made.
7. That provision be made by the Government to assure the selling of meats to the ultimate consumer at a reasonable price.
8. That refrigerating stations and other necessary plants be established by the Government at some convenient Brazilian port.
9. That every possible economy be effected in supplying meat to the army without any reduction in the amount of meat actually reaching the individual soldier.
10. That means be taken under Government control to put cheap milk within the reach of the poor without setting up any elaborate machinery of distribution.
11. That scientific inquiry be made as to the possibility of obtaining desiccated milk in large quantities from pastoral countries with a view to its being reliquefied for consumption.
12. That in view of the scarcity of milkers and consequent reduction of dairy herds, an attempt be made to induce women to take up the work and to persuade farmers to employ them.
13. That all wholesale milk dealers be required to furnish the names and addresses of farmers from whom they have purchased milk and the estimated quantity and price of the milk supplied by each producer.
14. That power be given local authorities so as to provide that where there is reason to believe that any group of retailers are using the present abnormal situation in order to obtain excessive profits, municipal shops may be opened for the sale of milk, meat, bacon, and other necessary foodstuffs.
15. That in the present emergency all local authorities be urged to start a sufficient number of maternity centers, baby clinics, and child nurseries, and should be empowered to provide a certain supply of milk to children under the age of 5, and dinners to expectant and nursing mothers; that doctors in charge of maternity centers, crèches, baby clinics, or nursery schools should be authorized to order milk and dinners for expectant or nursing mothers, for babies that can not be nursed by the mothers, and for children under the age of 5; and that the cost of milk, as well as that of dinners to expectant and nursing mothers, if incurred at such institutions on the certificates of duly qualified medical men, should be allowed as part of the expenses toward which special grants are made by the local Government board and the board of education.

With a view to ameliorating the situation produced by the increase of prices the committee submits the following recommendations:

1. We recommend that if, in any direction, the announced policy of the Government to establish fair and adequate rates of wages for women workers in controlled establishments has not yet been completely carried out, it should be enforced there with the least possible delay.
2. We urge upon all employers and public bodies the desirability of reviewing their pay roll, for the purpose of ascertaining whether any of the lower-paid



grades of labor have not yet received a substantial increase of earnings, and of taking steps to improve the position of those who hitherto may not have sufficiently benefited by the general upward movement.

### FOOD OF MUNITION WORKERS IN GREAT BRITAIN.

Supplementing its memoranda Nos. 3<sup>1</sup> and 6,<sup>2</sup> the British Health of Munitions Workers Committee issued, in August, 1916, memorandum No. 11,<sup>3</sup> giving the result of an investigation of workers' food and some suggestions as to dietary, by Leonard E. Hill, one of the members of the committee. Believing that it was desirable in the interest of efficiency to make an examination of the value and character of the food consumed by munition workers and to suggest dietaries that may be expected adequately to restore expended energy, the author of this memorandum conducted an analysis of specimen meals provided for munition workers at the plants, as well as those provided in hotels, and also of meals brought by workers from their homes. An effort was made to determine the percentage of protein, fat, and carbohydrate in the samples and the number of calories<sup>4</sup> furnished by each of these essentials which are required to replace the energy expended and for the repair and growth of the body. Emphasis is laid upon the value of eating fresh fruit, such as apples, oranges, and bananas, and of avoiding the highly stimulating foods and of refraining from eating between meals or at frequent intervals.

Fortunately the cheaper foods (bread, margarine, porridge, milk, herrings, cheese, beans, onions, cabbages, oranges, and the cheapest cuts of meat) provide all the requisite nourishment, and probably better health, than is derived from more highly flavored and expensive foods, which only artificially stimulate the appetite.

It is stated that about 15 per cent of the energy expended is derived from protein and about 80 per cent from fats and carbohydrates combined; also that the energy required by a man engaged in fairly light munition work is about 3,500 calories. Where calculations are based, as they are in this memorandum, on food as eaten, the minimum canteen diet may be taken to be about 3,000 calories per day when balanced among the three classes of foodstuffs in the proportions of 100 grams each of protein and fat and 400 grams of carbo-

<sup>1</sup>A digest of this memorandum appeared in the Monthly Review for May, 1916, p. 69.

<sup>2</sup>A digest of this memorandum appeared in the Monthly Review for June, 1916, p. 91.

<sup>3</sup>Great Britain. Ministry of Munitions. Health of Munition Workers Committee. Memorandum No. 11. Investigation of Workers' Food and Suggestions as to Dietary. A second appendix to Memorandum No. 3 (Industrial Canteens), London, August, 1916. 11 pp.

<sup>4</sup>The calorie is the unit of energy value and is the amount of heat required to raise 1 kilograms (4 $\frac{1}{2}$  pints) of water through 1° centigrade (1.8° F.).

hydrates. An average adult woman worker seems to require from 80 to 90 per cent of that required by men workers.

The investigation showed "that the average canteen dinner is a good one, containing, as it should, an energy value of about 1,000 calories well distributed among the amounts of protein, fat, and carbohydrates." The cost of the meals analyzed ranged from 5d. (10.1 cents) to 1s. 5d. (34.5 cents). The analysis of meals brought by workers from their homes showed a range in amount of calories from 683.4 in case of a man on the night shift to 1,719 in the case of a boy 15 years of age on the night shift. As respects meals served in women's restaurants, the memorandum gives an example of a "sensible meal supplied at a small cost" (12.2 cents), consisting of roast mutton, boiled potatoes, cabbage, and sirup roll, and furnishing 687 calories; and also "an example of the unsatisfying meals which pale-faced young women may often be seen consuming in popular cafés," consisting of roll, butter, milk, sugar, stewed prunes, and sirup, and furnishing only 397 calories, at a cost of 14.2 cents.

In order to afford assistance to caterers for munition workers a series of daily dietaries is included, and because of their adaptability to similar conditions of work in this country one of these menus is here reproduced:

## SUGGESTED DAILY DIETARY FOR MUNITION WORKERS.

[1 ounce equals approximately 28.35 grams.]

Article of food.	Cost in cents.	Weight in grams.				Calories.
		Gross.	Dry.			
			Protein.	Fat.	Carbohy- drates.	
Breakfast:						
2 boiled eggs.....	8.1	100	26.2	19.6	107.8	731.7
3 slices bread, butter, and jam.....	4.1	175				
Sugar.....	.2	10				
Milk.....	1.0	30				
Dinner:						
Meat pudding.....	10.1	120	32.0	52.1	178.4	1,346.0
Pudding (jam roll).....	4.1	160				
Potatoes.....	1.5	200				
Cabbage.....	2.0	120				
Tea:						
2 slices bread, butter, and jam.....	5.1	116	11.9	8.6	93.9	527.0
Piece cake.....	1.0	35				
Sugar.....	.2	10				
Milk.....	1.0	30				
Supper:						
Cold meat.....	7.1	70	41.5	23.1	64.2	648.0
Cheese.....	2.0	35				
2 slices bread and butter.....	4.1	116				
All meals.....	51.7		111.6	103.4	444.3	<sup>1</sup> 3,252.0

<sup>1</sup> This is taken from the report; the total should be 3,252.7.

## SOUTH CAROLINA'S BUREAU OF MARKETING.

BY JOHN G. HERNDON, JR.

During the month of August, 1913, E. J. Watson perfected the organization of a bureau of marketing under the South Carolina Department of Agriculture, Commerce, and Industries, of which he is commissioner.

The plan under which the bureau is operated consists of the use of two file cases, the cooperation of 6 daily and 21 weekly newspapers, the sending of a weekly bulletin to approximately 200 interested parties, and of a form postal card which reads as follows:

DEPARTMENT OF AGRICULTURE, COMMERCE, AND INDUSTRIES,  
BUREAU OF MARKETING,  
Columbia, S. C., ———, 191—.

DEAR SIR: Replying to yours of ———, please communicate with ———, ———, S. C., who ———. If you purchase or sell any of the above, notify this department, stating commodity, quantity, and price.

Yours, truly,

E. J. WATSON, *Commissioner*.

Each of these methods of advancing the usefulness of the bureau will later be referred to.

In each of the file cases there is an alphabetical classification of all farm products. In one of the cases there are filed cards on which are entered all "wants" received, while in the other case on similar cards "offers for sale" are entered under the proper headings. On these cards the name of a prospective buyer or seller is entered with his address, followed by a statement of the particular things that he wishes to buy or to sell, and the price that he is willing to pay or which he must receive. At the bottom of the card is entered the date of the letter which furnishes the information. The purpose of this last entry is to make it possible for the bureau of marketing to verify any statement that it may make with regard to the price quoted.

On these points Commissioner Watson said at the time of the opening of the bureau:

All over the United States this problem of marketing is being discussed theoretically, but practically every effort I have seen has been based too much upon generalities. General market information doesn't amount to much. What John Jones, living in the upper edge of Pickens County, wants to know, if he has a surplus of hay or oats or eggs that he can't sell in his own community, is who wants to buy those very things in a distant community. He wants to know the man's name, address, and just exactly how much of a commodity a man wants, and, what is more, he wants to know this right away; and so the man at the other end wants to know where and from what individual he can buy what he wants and exactly what it is going to cost him. \* \* \* The process will be something like this: A man writes to us that he has such and such a



quantity of a given commodity to sell and quotes his price, which can not be changed when listed here for a period of 10 days from the date of his notice. We notify him of his registration. Another man writes that he wants such and such a quantity of the same commodity. A card form gives each of the two the other's address and the information that they want. If they complete the transaction, then the man who makes the sale reports the same to this office on a prepaid post-card form, and the commodity that he has listed here is eliminated from our list. A brief glance at the card form will indicate to the public mind how automatically the system will work.

The bureau of marketing, of course, does not undertake to make any guaranty of the sale; it merely undertakes to list the information and to become a clearing house for information between buyers and sellers of agricultural commodities.

Of course, the very essence of the great success of the simple plan operated in South Carolina is the hearty cooperation of the daily press of the State, which every Tuesday morning gives space free to the bureau of marketing bulletin, thus acquainting thousands of people in all parts of the State with the wants and offerings of the week undisposed of at the date of issue. This bulletin is published regularly by *The State*, Columbia; *The News and Courier*, Charleston; *The News*, Greenville; *The Intelligencer*, Anderson; and *The Herald*, Spartanburg.

Each Monday there is prepared a list of the articles still offered for sale or exchange and those which others desire to buy. These lists are then turned over to representatives of the papers above mentioned for publication on Tuesday. Twenty-one weeklies also publish these lists.

When the plan was undertaken Commissioner Watson found the newspaper men rather dubious about the advisability of printing the lists regularly. He announced, however, to the representatives of the daily newspapers that in case they should fail to double their circulation in the rural districts of the State within the next three months after the institution of the scheme he would consider that he had failed to make good in his endeavors. It is an interesting commentary on the success of his work that each of the papers reported at least a doubling of its rural subscription list within the period mentioned, and one of the papers tripled its rural subscription in less than two months.

On each Thursday morning a printed bulletin is sent to those whose names are on a mailing list—merchants and others who take commodities in commercial quantities. This is the list, including the names of about 200 persons, referred to in the beginning of this article.

While, primarily, it is desired that individual producers and consumers avail themselves to the fullest of the opportunity offered, this in no sense precludes merchants in towns and cities from availing themselves of the opportunities

offered to secure a first-class product, fresh and pure, direct from the farm. There is no reason, for instance, why merchants selling oats or hay should not avail themselves of this channel and secure for market purposes supplies of fresh, home-grown goods. Instead of buying sulphuretted oats brought away across the continent from Texas, and moldy hay brought away from the far West, and so with a thousand other things. Notably the immense stocks of canned goods now brought from the West and the East could, to the advantage of everybody and to the cause of pure food, be supplemented by the wholesome home-canned goods put up by the thousands of girls of our own State who are members of tomato clubs. Take, for instance, the demand for cream in the ice-cream parlors operated throughout the State, and the lack of market for cream in the dairies that scores of men in the country are endeavoring to establish. In a word, this whole thing looks to the conduct of business in the State of South Carolina on a fair economic basis and with a greater profit to everybody concerned than most people have ever even dreamed of. Early in the year, after the bureau had commenced getting out its marketing bulletins giving addresses of merchants who had pledged themselves to buy home-grown grain and other products at market prices, the bureau was forced to commence the publication of a supplemental market sheet designed to be mailed every Thursday to about 200 merchants dealing in farm products.

Outside of general correspondence cost and the salary of one clerk, the only actual item of expense is for postal cards sent to the farmers who have communicated with the bureau concerning their wants or offers for sale. A sample of this postal card has already been given. The clerk is a young woman who, in addition to being a rural sociologist, speaks several languages and has had wide experience in dealing with such problems as naturally confront a person in her position. The total cost of the operation of the bureau is reduced to a minimum through the lack of necessity for any considerable expenditure for printing or postage, the chief expense of this sort being done away with through the beneficial cooperation of the State newspapers. Yet, contrasted with this slight cost to the State is the fact that the average transactions of the bureau amount, according to Commissioner Watson, to approximately \$30,000 per week in dull seasons, and at least \$60,000 per week in rush seasons.

In the three and a fraction years that this work has been carried on there have been received in the commissioner's office but two complaints, while, on the other hand, thousands of letters have been received thanking him for the work of his bureau. Under the heading "Comment of beneficiaries" in the Twelfth Annual Report of the Commissioner of Agriculture, Commerce, and Industries of South Carolina are found numerous citations from letters received concerning the value of the bureau of marketing, a few illustrations from which may be of interest.

C. Bart & Co., Charleston: We thank you for your bulletin received yesterday. On information received, we at once sent an order to one of the farmers for 120 bushels of oats, which we had been trying to buy for three weeks without success.

You will confer a favor upon us by sending your bulletins as often as published. It will be a further help to us.

Dr. F. M. Dwight, Wedgefield: Please notify party advertising sugar-cane sirup at 37½ cents in your columns of yesterday that I will take same.

O. H. Culler, Raymond: I wish to thank you for helping me to dispose of my oats and rye seed. It is all sold now at a fairly good price, owing to your generous help.

John S. Cathcart, Winnsboro: I have sold out of burr clover seed. I wish to thank you for the addresses I received through you. I think you are doing a great work for the farmers in advertising their products.

Mrs. F. M. Gadsden, Rockton: I ordered the M. B. turkeys that Miss Lois Scheck had listed with you last week. They came on time and we are very much pleased. You are doing a great work to keep farmers and poultry raisers in touch one with another.

This letter, giving a good general idea of the uses to which the bureau of marketing is put, is from E. C. Newton, Tatum:

#### WANTS.

I want to purchase a few hives of bees in modern, up-to-date hives.

Also, want to purchase three or four Mammoth Toulouse geese, hens, about 2 years old.

I want to get into communication with some party who has a good farm of about 150 or 200 acres to sell, two-thirds to three-fourths cleared, tillable land, located on good public highway or at a country crossroads, where there would be a good location for a country store. Also, would wish same to be located quite near a railroad station, and convenient to a good Methodist church, and near an up-to-date live high school, with good buildings and a large, roomy dwelling.

#### OFFERINGS.

Fancy, pure-bred, White Holland turkey toms for sale at \$3.50 to \$5 each, or \$7 per pair.

Two specially nice Jersey heifers \* \* \* for sale at \$50 each.

One young Jersey bull, 5 months old, at \$25.

Sweet potatoes in 2-bushel bags, at \$1.25 per sack.

Groit peas, Taylor peas, and Cotton Patch peas for sale, price a matter of correspondence.

One hundred bushels of Coker's Special Webber No. 82 staple cotton seed for planting, at \$2 per bushel.

Forty bushels of Coker's General Webber cotton seed for planting, at \$1.25 per bushel.

Forty bushels of Cleveland Big Roll, at \$1 per bushel.

Forty bushels of Mexican Big Roll at \$1 per bushel.

Would exchange peas, potatoes, wheat, oats, rye, cotton seed for planting, and turkeys for other poultry.

One pair of half-breed Toulouse geese for sale or exchange. \* \* \* Would like to have the address of party who had the Dunlap buggy and 4-year-old Shetland pony for exchange. Also address of party who wanted to exchange Silver Laced Wyandottes for Bronze toms.

The address of party who wanted the trio of Bourbon Red turkeys.

The address of party who wanted to exchange Partridge Wyandotte eggs for wheat, oats, etc.



The address of party who wanted to exchange a pen of Japanese Black Rail Bantams for turkeys.

Address of party who had a pair of Bronze turkeys, Tennessee strain, for sale or exchange.

Address of party who wanted a one-horse farm to share crop.

Address of party who has eight head of beef cattle for sale at 4 cents per pound.

Address of party who had a few nice turkeys for sale.

Address of parties who have hens and pullets of any breed for sale or exchange.

I am asking a good deal of you, but I guess that is what you want—inquiries and customers for the things listed in the bulletins. And I will appreciate the address of these parties.

Direct dealing between nonresidents of South Carolina with residents is steadily increasing, inquiries recently having come from and sales having been arranged for and consummated between persons living in Georgia, Indiana, Maryland, Missouri, Ohio, and Pennsylvania, on the one hand, and South Carolina on the other. The growth of the usefulness of the bureau has been accelerated by its publication of special bulletins, which include such divisions as: Practical marketing data; dealers who will buy home products, listed by counties, and with the kinds of goods they handle indicated; grain elevator information; interstate and export opportunities; the market for cane sirup; list of flour mills in the State; transportation regulations concerning agricultural products, etc.

The purpose of the bureau has been, and continues to be, to lessen the difficulties of trade in farm products by finding a market for goods of value which might otherwise be a total loss to those who have them. When tatting is sold as a result of the bureau's efforts, or, as has happened, a sale is effected of two monkeys or a Japanese poodle, no direct agricultural gain results. Indirectly, however, every person thus profiting by the bureau's existence becomes a "booster" for it, and in certain counties of the State the opportunities the bureau offers have been revealed by some such unusual sales as those just mentioned. So it happens that hired men, share croppers, or others who seek to work on a farm, land, old machinery, such as a second-hand disk harrow or a plow—all receive attention in order to accommodate as many people as possible and to attract new patrons.

The system applied to farm products in the bureau is shortly to be applied, in cooperation with the Federal Department of Labor, to the solution of the problem of distribution of labor and the placement upon farms of men seeking homes. This arrangement, of course, contemplates the operation of a clearing house for men seeking positions and for the buying and exchanging and leasing of farm lands.

One result of the bureau's activities already noticed is a marked increase in the diversification of crops. Another advantage is the changed attitude of nearly all the agricultural communities of the State toward taxation. As Commissioner Watson said, "A farmer who has just made a net profit of 30 cents as the result of a sale the State has made possible—real cash and not a promise of cash—commences to take an increased interest in government and to have a decreased resentment toward paying his share of the expense of it." This bureau has done much to encourage the boys and girls of the canning clubs of the State to continue to strive to improve farm conditions. The great thing that the bureau has done is not that it has increased the number of firms that have pledged themselves to buy home products, but that it has caused exchange values to exist whereas before much of the excess produce raised on small farms was unavailable for market. It is for this reason that the following statement of Mr. Watson is significant:

We had a striking case the other day. A man in the Piedmont had been literally wasting large quantities of buttermilk; there was a man away down on the coast who had a great demand for buttermilk; to-day the man who was throwing his buttermilk away is getting 40 cents a gallon for it delivered at his own station in the Piedmont and the man on the coast is getting what he wants.

Another sample of the same sort of beneficial exchange is to be seen in the "Trades day" meeting of certain municipal chambers of commerce, for thither come farmers from the whole country to list their salable goods. As a result of one such meeting Bermuda grass has commenced to have a commercial value instead of being considered a weed, the hay therefrom selling recently at \$1.25 per hundred pounds.

#### VOCATIONAL TRAINING OF GIRLS IN NEW YORK.

A bulletin of the University of the State of New York, which is the State department of education, issued on April 1, 1916, is devoted to a study of vocational training of girls.<sup>1</sup> It is explained at the outset that the State gives financial aid to vocational training in schools for girls and for boys and that the university, through its study of conditions, needs, and resources of different localities, and by correlation of the methods and ways and means which are successful or give promise of usefulness in the training of girls, aims to bring suggestive and helpful thought to aid in the widest and most economical use of local resources in the improvement of school training. In New York, as elsewhere, vocational education of girls

<sup>1</sup> Vocational Training of Girls in the State of New York, by Anna C. Hedges. University of the State of New York, bulletin No. 612, April 1, 1916. Albany, 1915. 41 pp.

comprises a variety of work, including household arts, domestic science, and home making, or more specifically, cooking, sewing, millinery, household chemistry and physics, power-machine operating, novelty work, straw sewing, costume drawing, applied design, and academic studies, and includes the following types of work: Vocational, prevocational, trade training, continuation.

As an example of this latter type the report cites the department-store continuation classes, now in the second year of their existence, in Manhattan and Brooklyn, conducted by public school teachers under the direction of the New York City Board of Education in cooperation with managers who give those employees under 16 years of age, who may desire it, from 5 to 10 hours a week each for instruction without deduction from their weekly wages.

Invariably this study of the common branches, so planned as to be in direct relation with daily needs and usage, increases the wage worth of these workers.  
\* \* \* This supplemental study is their great opportunity, coming as it does during the first hours of the working day, applying the study of reading, writing, and arithmetic directly to their work problems, and making no reduction in their wage, in fact increasing it by virtue of increased working power.

In certain of the large cities of the State prevocational courses have been developed in order to disclose special aptitudes, and in planning such courses it is urged that the cooperation of industrial leaders be secured and that a study be made of local industries which employ girls.

This report is confined to vocational training for girls in home making, in the belief that "if such training as is outlined were given to every girl in so far as she is mentally able to profit by it, the problem of training for wage earning would be a vanishing one." It is stated that these home-making courses correspond in allotted time to vocational courses for boys, and schools receive State aid on the basis of compliance with specific requirements as to the age and grade of pupils, length of school day, proportion of book and shop-work, and special preparation of teachers.

At present these home-making courses are extensions of former domestic-science courses, the greater amount of time allotted being used in doing more cooking and more sewing. In addition to this technical work, bookwork is brought into direct relation with materials, tools, and processes. When the cooking of starch is the kitchen problem, information about the source, production, manufacture, and uses of starch is the work in English and geography, the quantitative and accounting problems are studied in the arithmetic class, the industrial development of the subject in the history class.

In this connection letters from teachers in vocational schools are quoted to show how practical is this movement for the training of girls. The following letter is typical:

In connection with the cooking lessons the students have been given the privilege of soliciting orders for some particular dish after the lesson upon the



same has been well mastered by the class. The object of this is twofold, viz, to make it possible to prepare dishes in ordinary quantities and to emphasize their actual cost in time and money. The prices charged cover only the cost of material and fuel, and the girls work out the cost themselves and submit it, of course, for the teacher's approval. \* \* \*

Order work most commonly includes pies, cakes, rolls, bread, canned fruit, jellies, marmalades in season; boxes of lunch are prepared and salad dressing made. When lessons in invalid cookery have been given the girls have become so interested that they have asked the privilege of making dishes to take to their sick friends. The effect of this sort of work in developing self-respect among the girls has a marked effect upon the discipline of the class.

At the close of the second year's work the girls prepare and serve simple home dinners to five or six teachers or pupils at cost. This secures practice in the preparation of an entire meal and in computing the expense of feeding an average sized family.

The success which has attended the Manhattan Trade School for Girls in New York City, indicated by the fact that there is a waiting list of several hundred applicants for admission to its classes, is briefly noted.

Under the caption "Household arts in grammar schools" the author takes up cooking, sewing, and costume drawing and household decoration. It is pointed out that in giving this instruction to girls an effort is made toward the separate study of the scientific and the art aspects of household subjects, considering—

household arts in relation to school training to include cooking, serving, cleaning, laundering, sewing, repairing, gardening, nursing, purchasing, accounting, and other phases of the art of household management; household science as the analysis and study of materials, tools, machines, and processes used in household activities; home making as comprising household arts, household science, and their relation to the family and the community.

In the cooking classes the plan seems to be almost invariably for individual instruction, although occasionally the girls may work in pairs. Lessons are usually 90 minutes long, allowing for a discussion of the theory of the processes, doing the cooking, eating the product, and washing the dishes. A course of lessons proceeds in succession from beverages, fruits, through vegetables, starches, sugar, meats, fats, flour mixtures, to combinations more complex, and ends with a few meals as the united accomplishment of the class.

In the instruction of sewing the purpose is to enable girls to make their own clothes and hats, and to know the characteristics of fibers—cotton, linen, silk, and wool. This is attained in many places through instruction which begins in the fifth grade.

Costume drawing is given as a part of the sewing course, since it adds the feature of art to the training by detailed attention to line, spacing, and the arrangement of each to various figures. It is believed that the spread of training in this subject and in that of house-

hold decoration will be a movement toward not only more pleasing appearances but more economy in expenditure of time and money.

A course of household arts to be offered by high schools is suggested.

The basic principle in the training of women in household arts is said to be not how much can be taught of the subjects in a given time, but rather what are the essentials to be taught and how can the teaching be given most practical expression and application in organized work done by pupils under direction.

There is lack of coordination in the teaching of subjects naturally related; for example, the seventh and eighth grade work in sewing and cooking is not coordinated with other science work. Science study should be the basis of the practice in food preparation and study of food materials.

Continued and increased demand for teachers of home-making and vocational work prompts the author to emphasize the importance of adequate training by normal schools, which it is believed should organize classes for short courses in the household sciences. And not only this, but "there seems to be a need for older teachers of larger life experience."

The teaching of home-making needs to rest on a base broader than that which has sufficed so long (namely cooking and sewing with their accompanying science and art), that of the home, its ideals, activities, and responsibilities, since the State is aiding localities to initiate and maintain home-making courses. \* \* \*

Is it not our imperative duty as educators to give girls a training parallel to that of boys in order to enable them as women to work alongside of men, and to prepare them to assume equal if not similar responsibilities?

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## VOCATIONAL GUIDANCE IN GERMANY AND GREAT BRITAIN.

### GERMANY.

Although Germany has a continuation and part-time school system, which has become a world model, and a highly efficient system of employment bureaus which place boys and girls who seek work, it has no organized movement of vocational guidance. In the past the economic and social position of the children has for the most part settled the general class of employment which they were likely to enter. This fact partly explains the absence thus far in Germany of a scheme of guidance comprehensive and supported by law. Guidance, it has been thought, was a somewhat needless procedure in the case of young people whose career was more or less a predetermined matter.

Recent events have shown the discontent of leading German economists and educators with such an erroneous assumption and the situation which it has created. The lack of organized voca-

tional guidance had caused an overcrowding of certain trades and the entering into the ranks of unskilled pursuits by large numbers of young persons. The consequences were chronic unemployment and underemployment. The economic results of this chaos have been pointed out at conventions of economists and labor organizations. In Bavaria, for instance, which has a model system of continuation schools, the Social Democratic Party has in a recent convention written in its municipal platform a strong statement in favor of municipal vocational bureaus, to serve, on the one hand, the schools which have not the economic contact, and, on the other, the labor bureaus which have not the social outlook. Within the last few years some of the directors of the municipal statistical offices, who are usually trained economists, have seen the gap between the elementary school and the continuation school. In several cities the directors of these offices have established what they call parent consultation hours. They have taken the valuable statistical material hitherto compiled only for the student and dealing with the labor market, apprenticeship, conditions of employment, and the rise and fall of wages, and they have made that information available to parents, children, teachers, and employers, who resort to these offices for expert consultation.

The schools, too, have not been indifferent to the career problems of the children. Before the school-leaving period draws near, and shortly before the fourteenth birthday, teachers and others call attention to the various wage-earning opportunities open to children. They describe the supplementary training provisions of the municipality and the procedure in getting work through the public employment bureau. Parents are invited, before the children leave school, to attend informal conferences, at which a brief talk is given to point out the mischief of drifting into employment without forethought and plan. Many towns are distributing handbooks showing what the various occupations are and their educational requirements.<sup>1</sup>

Specific advice is avoided by German teachers, who realize that giving occupational information is the work of a specialist and that people unprepared for this task should not assume the serious responsibility it entails. The above handbooks are intended to supplement the general advice given by the teacher, and have supplanted the familiar literature of the "How to succeed" type with which youth in quest of a life career was regaled before the close of the nineteenth century. These occupational handbooks now form

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<sup>1</sup>The above introductory statement, though not exact quotation, was taken from "Youth, School, and Vocation," by Meyer Bloomfield, Director of the Vocational Bureau of Boston. New York, 1915.



a literature of considerable extent. The contents of only three sets will be discussed here.

The first of these sets consists of two booklets compiled on the initiative of the Society of German Catholic Schoolmistresses. One is a general occupational handbook for boys leaving school and the other for girls. The former<sup>1</sup> in an introduction addressed to parents instructs the latter on the general principles to be observed in advising their sons as to a prudent choice of occupation. This is followed by a chapter discussing the general physical requirements for employment and various diseases and physical defects which make boys unfit for specified occupations. Occupations open to cripples, blind and deaf-mute boys are enumerated next. Subsequent chapters deal with the chances in industrial occupations, apprenticeship, and the duties of apprentice and master on the basis of legal provisions. These introductory chapters are followed by an enumeration of individual occupations, showing for each occupation the inherent dangers, the education and physical requirements, period of training and compensation during this period, wages of skilled workers and chances for promotion or independent establishment. The occupations are arranged in the following nine groups: (1) Mercantile occupations; (2) handicrafts, trades, and industry; (3) mechanics, artistic trades, and arts; (4) agriculture; (5) army, navy, and merchant marine; (6) railroads; (7) post and telegraph service; (8) clerical occupations; and (9) colonial service. The booklet concludes with a warning to parents to guard their boys from the three great dangers of intemperance, tuberculosis, and frivolity.

The booklet for girls<sup>2</sup> in its introduction addresses itself directly to the pupils leaving school. After enlarging on the present increased opportunities in gainful occupations for girls as compared with those of three or four decades ago, the booklet impresses upon the girls that in choosing an occupation they should be guided by the following four factors: (1) Their physical condition and mental aptitude; (2) the economic conditions of their parents; (3) the family conditions (whether parents are living, whether orphan or half-orphan, whether the only child or one of a numerous family, etc.); and (4) the local opportunities for employment and training. Various occupations are enumerated for the following four groups of girls: (1) Girls who must earn their living immediately on leaving school; (2) girls who can afford several years' apprenticeship; (3) girls whose parents can afford to send them to a continuation or trade school; and (4) girls who choose a scientific career, especially as teachers. Details as to

<sup>1</sup> *Erwerbsberufe für schulentlassene Knaben*. Bearbeitet von E. Richartz, Lehrer. Essen, 1908, 63 pp.

<sup>2</sup> *Erwerbsberufe für schulentlassene Mädchen*. Zusammengestellt von den Lehrerinnen Kath. Hermeling und Therese Kirch. Sechste verbesserte auflage. Essen, 1914.

the individual occupations are given in the same form as in the booklet for boys. A list of societies for working girls, the principal provisions of the Workmen's Insurance Code and the Industrial Code (pass books, certificates, wage books, labor contracts, fines, protective provisions, continuation schools, etc.) conclude the booklet. On account of their general scope and their low price of 15 pfennigs (3.5 cents) both booklets are especially adapted for distribution by schools.

A Dresden publishing house<sup>1</sup> which publishes a vest-pocket library of many hundred volumes, selling for 10 pfennigs (2.38 cents) each, has incorporated in this library a series of over 100 occupational guidebooks under the title, "Was werde ich?" (What shall I be?) The first volume, No. 500, of the series is a general guide giving briefly the fundamental principles for both sexes in the selection of an occupation, and physical and educational requirements. All the other volumes deal each with an individual occupation and represent nearly all the principal handicrafts, trades, professions, and arts. Booklet No. 570, with the title, "The Lithographer," may serve as a typical example of the series. In its 48 pages it gives a brief popular description of the technique of the lithographer's trade (the various processes, tools, and machinery used, etc.), the educational and physical requirements, period of apprenticeship, principles to be observed in the selection of the master or establishment, a model apprenticeship contract, the legal provisions on apprenticeship, technical education in continuation and trade schools and the Academy for the Graphic Arts in Leipzig, wages of skilled lithographers, and chances in the trade.

A third set of handbooks is published by C. Bange in Leipzig under the title, "Mein künftiger Beruf" (My future vocation). This series consists of about 100 volumes, selling for 50 pfennings (12 cents) each. About 80 volumes are given over to occupations for men and the remainder to occupations for women. The professional, clerical, and civil-service careers are much better represented in the collection than the trades. The trades and clerical occupations are described on the same plan as in the above-mentioned, less pretentious series, but in a more detailed manner, showing the costs of the practical and theoretical training during apprenticeship, the requirements for the journeyman's and master's examinations, and the principal characteristics of the trade. A list of representative literature relating to the trade concludes each handbook. The handbooks for civil-service occupations show the preliminary education and training required for admission to examinations, the subjects of the examinations, the salaries and perquisites of the individual salary and

<sup>1</sup> Verlag für Kunst und Wissenschaft. Albert Otto Paul.

rank classes, chances for promotion, organization of the service branch in question, etc. The professional handbooks describe the entire curriculum and cost of studies for the obtaining of a degree, possible practical training required for admission to practice of the profession, and the opportunities in the profession. Handbook No. 77 of the collection gives advice to impecunious young persons wishing to attend a college, how to obtain scholarships, free board or lodging, and other benefits and facilities.

The handbooks discussed here can by no means be considered an equivalent substitute for organized vocational guidance. In the absence, however, of the latter they enable parents and guardians to obtain valuable information as to the advantages and disadvantages of the individual occupations, on the basis of which they can make a more prudent choice of occupation for their children or wards than by simple reliance on their own knowledge.

#### GREAT BRITAIN.

Scotch and English towns have for years been carrying on some juvenile advisory and placement work, frequently through members of the care committees, established primarily to supervise school feeding. Two parliamentary enactments, however, one known as the labor exchanges act of 1909 and the other as the education (choice of employment) act of 1910, as well as the separate education act of 1908 of Scotland, may be said to be the mainsprings of the present vocational guidance activities in the United Kingdom. Based on these acts, the following two methods of administering juvenile employment schemes are in operation:

One is the board of trade scheme, whereby that board conducts a juvenile labor exchange as part of the national system of labor exchanges throughout the country and furnishes both the funds and the officials. In such case the board appoints a local committee of representative men and women, called the juvenile advisory committee, whose duty is to cooperate with the exchange officers. London affords a striking example of this type of development.

The other method permits the juvenile exchange to be administered by the local education authority, namely, the education committee of the council, provided that said local authority submits a scheme to the board of education which can be approved under the joint memorandum issued by the board of trade and board of education with regard to cooperation between labor exchanges and local education authorities exercising their powers under the education act, 1910. On approval the board of education sanctions a grant of money in aid of the advisory work of the local labor exchange. This is an adaptation of the plan followed by Scotland in organizing its employment



information bureaus in close coordination with the schools some time before the national system of labor exchanges came into existence. Nearly two score local education authorities are now conducting such school advisory and employment agencies, the best known being those in Birmingham, Liverpool, and Cambridge. Additional cities and towns have submitted schemes, which are awaiting approval.

Certain basic features are common to all juvenile labor exchanges, whether under the board of trade or the local education authorities. These features are, first, keeping a record of the children leaving school for work; second, offering advice and guidance to boys and girls between 14 and 17 years of age; third, granting interviews to parents and others who desire to consult the officials; and, fourth, keeping a register of the positions open. The schools have to keep for all pupils, whether they desire assistance in finding employment or not, a card record as to health, character, aptitudes, etc. The cards for all pupils leaving school are turned over to the juvenile employment bureau.

The advisory committees represent a vast amount of unpaid public-spirited service, and the juvenile labor exchanges have profited greatly by their interest and cooperation. In London and elsewhere these committees are divided into subcommittees known as "rotas," in sessions of which members take turns in personally advising the outgoing boys and girls.<sup>1</sup>

A number of handbooks on the trades best represented have been prepared and published on behalf of the board of trade for various cities. The introduction to each of these handbooks states explicitly that they are intended primarily as a source of information for the members and helpers of advisory committees for juvenile employment and school-care committees, in order that they may be better able to discuss the conditions and prospects of the various employments with parents and their boys and girls. It is, however, suggested in the handbooks that the general information contained in them be supplemented to meet individual requirements by reference to information in the possession of the appropriate labor exchange or juvenile employment bureau.

Of the handbooks prepared on behalf of the board of trade those designated for the use of "Greater London" will be the first described here. The title of the series is "Handbooks on London trades." The series is intended to consist of some 20 pamphlets arranged as far as possible in accordance with the census classification of occupations. Eleven pamphlets covering the following trade groups have so far been published: Chemical and allied trades; commercial occupations; engineering; the glass trades; clothing trades,

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<sup>1</sup> See footnote, p. 67.

Part I, girls; Part II, boys; vehicle making and miscellaneous metal trades; leather, fur, brush making, and feather trades; food, drink, and tobacco trades; gas and electricity supply trades; laundry work, dyeing, and cleaning; precious metal, instrument making, and sports trades; and shop assistants. In the preparation of the series, information has been drawn from the following sources: Official publications of and information in the possession of the board of trade; two handbooks entitled, "Trades for London boys" and "Trades for London girls," prepared by the Apprenticeship and Skilled Employment Association; various works on social conditions; technical literature of many kinds; and personal investigations made possible by the kindness of a number of London employers. Each pamphlet gives a general account of the trades covered, describes the process of each individual trade, and shows for the various occupations the method of entry, wages, hours of labor, sanitary conditions and dangers, qualifications, suggested educational courses, prospects, and general considerations. A list of the labor exchanges in Greater London, indicating those in connection with which an advisory committee has been established and a list of those education authorities which have adopted schemes approved by the board of education are found at the end of each handbook.

The handbooks issued for the Birmingham trades were prepared on the basis of information obtained by personal visits to workshops and factories and interviews with a number of employers, working men, and women. Previous to publication each handbook was submitted to the criticism of several employers and work people. The trades so far covered are: The brass trade, electroplate trade, engineering and allied trades, the general brush trade, jewelry, flint glass and allied trades, manufacture of sporting guns and rifles, printing and allied trades, tool-making trades, van-boy labor, and some possible trades for physically handicapped children.

Another series of handbooks, covering the Yorkshire trades, includes the following pamphlets: Engineering trades in Leeds, Halifax, Dewsbury, and Huddersfield; Textile trades, Batley and Dewsbury; Textile trades, Halifax; Textile trades, Huddersfield; and Textile trades, Leeds.

In all handbooks prepared by the board of trade the material is presented in the manner described in the above discussion of the handbooks for Greater London. Recently published handbooks contain the remark that the handbook was written before the outbreak of the present war and that the conditions described are accordingly those prevailing in normal times.

The education committee of the city of Bradford has published a series of vocational guidance handbooks under the title "Occupations open to young people in Bradford." One of these handbooks

covers the woolen and worsted trade and another the engineering trades. A third pamphlet is given over to women's occupations, a fourth to the professions and civil service, and two other pamphlets cover miscellaneous trades and clerical occupations. A description of the occupation, technical, and educational training, hours of labor and wages, and general condition of the labor market, form the text of these booklets.

In Edinburgh the board of trade and the school board have arrived at an arrangement whereby the vocational guidance work of both authorities is carried on jointly by the educational information and employment department of the school board. This department has published two leaflets: "Thoughts for a boy on choosing work" and "Thoughts for a girl on leaving school," which are distributed in the schools to pupils approaching the leaving age. As indicated by their titles, these leaflets contain merely general advice as to the choice of an occupation. Attention, however, is called in them to the office hours of the information and employment department, and every boy and girl, as well as their parents, are cordially invited to call at the office for special information and advice. Of a series of small handbooks published by the department, the following three numbers have thus far been issued: "How to Become an Engineer," "How to Become a Printer," and "How to Enter the Civil Service."

In addition to the above-enumerated handbooks published by State and local authorities, a considerable literature of privately published handbooks on vocational guidance exists in England. Lack of space permits here mention of only a few of these publications. First among those to be mentioned is a *Handbook of Employments*, by Mrs. Ogilvie Gordon (Aberdeen, The Rosemont Press, 1908. 444 pp.). In this book the occupations are divided into three classes: Industrial occupations with short periods of training, apprenticeship trades and occupations requiring long periods of training, and professional callings. For the first class a table shows for each occupation the age of entry and the beginners' and full average weekly wage. A table for the second class shows the period of apprenticeship, usual age of entry, first year's and last year's wages during apprenticeship, and full average wages for skilled workers. The text following these tables gives details as to the nature of each occupation, hours of labor, etc. The course of studies required for entrance and prospects, or salaries, are shown for the professional callings.

The following two handbooks are quoted as sources for the vocational handbooks published by the board of trade for Greater London: *Trades for London Boys and How to Enter Them* (Longmans, Green & Co., London, 1912. 204 pp.), and the companion book, *Trades for London Girls and How to Enter Them* (same publishers,



London, 1914. 167 pp.). Both books were compiled by the Apprenticeship and Skilled Employment Association of London, whose object is "the promotion of thorough industrial training for boys and girls, by apprenticeship and other methods, including arrangement for attendance at trade schools and at technical classes." The accounts of the various occupations shown in the two books are based on investigations made by members of the association, and to insure accuracy have been submitted for criticism to experts in each trade.

The introductory chapter to the book on trades for London boys sets down a series of general principles as to considerations of health, prospects in the trade, thorough training, indenture, premiums for apprenticeship, how to find an opening, and trial service to be observed in choosing an occupation. A list of day trade and art schools follows. Then is shown for each trade the period of apprenticeship, whether a premium is charged by the master, wages during apprenticeship, age of entry, proportion of apprentices permitted, name of trade union, minimum union wage for skilled workers, hours of labor, and technical classes. The occupations are grouped under the following headings: Building, clothing, designing, glass, leather, metal, precious metal, printing, woodworking, and miscellaneous trades, and miscellaneous occupations. An appendix gives digests of the factory and workshop acts and other legislation affecting boys, and information as to the juvenile advisory committees, trades for delicate boys and boys with special qualifications, hints on the arranging of apprenticeships, and a list of London County Council day trade and technical schools. An alphabetical index concludes the book. The companion book on trades for London girls is written on essentially the same plan as that for boys.

Under the title, *Choosing a Boy's Career*, Henry C. Devine (Henry J. Glaisher, London, 1914, 91 pp.), has published a practical guide for parents, guardians, and schoolmasters. The author is the founder of the Future Career Association, which for a moderate sum furnishes expert vocational advice.

The book, after devoting a chapter to general considerations on the choice of a career, shows the entrance requirements and prospects in governmental (naval, military, police, civil service, municipal), professional, commercial, and agricultural careers, and the preparation for these careers.

Finally, mention should be made of a collection of "penny guides to trades and handicrafts for youths and girls leaving school," edited by W. Becket Burnie, principal of the technical college in Brighton (George Philip & Son, London, publishers). These vest-pocket penny guides are issued under the title, "What to Be." Each of the 25 booklets so far published covers an occupation and has been

written by a technical expert. The booklets describe the occupation and show the hours of labor, wages, apprenticeship conditions, cost of training, and a list of standard technical books on the trade.

#### MATERNAL MORTALITY IN CONNECTION WITH CHILDBEARING.<sup>1</sup>

In its series dealing with infant mortality the Local Government Board of Great Britain has recently published a report on maternal mortality in relation to childbirth, consisting of four parts. The first deals with the national aspect of the declining birth rate. The second takes up the subject of maternal loss of life in connection with childbearing, showing the relative importance of different causes and the variations of the death rate in different localities. The third deals with the conditions influencing mortality from childbearing, and discusses the connection between it and such factors as stillbirths, midwifery attendance, birth rate, illegitimacy, etc. Part IV discusses methods by which the public health administration may reduce the mortality and morbidity due to childbearing.

The birth rate for England and Wales is shown to have fallen from 36.3 per 1,000 of population in 1876 to 23.8 in 1914. During this period the death rate has steadily decreased, so that the net decennial per cent of increase in the population, after allowing for migration, has fallen only from 13.21 in 1861-1871 to 10.89 in 1901-1911. In the nature of things, however, the death rate can not decrease indefinitely, while the birth rate can; hence the desirability of using every means to check any further fall in the latter, and of preventing any unnecessary sacrifice of the lives of childbearing women.

To a very large extent the same causes operate in producing both excessive maternal mortality and excessive infant mortality in the first few weeks after birth and still more in the antenatal period. \* \* \* It may indeed be taken as axiomatic that any influences brought to bear to improve the health of mothers must also influence favorably the health of their infants.

The second part of the report deals with the deaths occurring in connection with childbirths in England and Wales for the four years, 1911-1914, four years rather than one being taken that the figures might be larger and more indicative. For this period the number of deaths assigned to complications of pregnancy and childbirth was 14,045, corresponding to a rate of four per 1,000 living births. These births are divided as to cause into two groups, those due to puerperal fever and those due to other complications of childbirth.

<sup>1</sup> Forty-fourth Annual Report of the Local Government Board, 1914-15; Supplement containing a report on maternal mortality in connection with child-bearing and its relation to infant mortality.

The death rate for each of these causes and for the two combined was for various divisions, as follows:

DEATH RATES FROM COMPLICATIONS OF PREGNANCY AND CHILDBIRTH, 1911 TO 1914

Division.	Death rate per 1,000 living births from—		
	Puerperal fever.	Other complications of pregnancy and parturition.	All conditions adversely affecting childbirth.
Total administrative counties.....	1.38	2.59	3.97
Total county boroughs.....	1.47	2.57	4.04
Total metropolitan boroughs.....	1.48	1.58	3.06
England and Wales.....	1.41	2.59	4.00

This shows a much higher mortality in the counties and the county boroughs than in the metropolitan boroughs. This difference does not exist in respect to puerperal fever, but is due to the fact that the mortality from other complications of childbearing is 64 per cent higher in the counties and county boroughs than it is in London. This means that over 800 mothers die annually in England and Wales as a result of childbearing whose lives would be saved if the experience of the rest of England and Wales were as favorable as that of London. But in the matter of puerperal fever, London loses its advantage and shows a death rate even higher than that prevailing in the counties and the county boroughs. Puerperal fever is looked upon as almost completely controllable, and consequently deaths from this cause are in the main unnecessary:

If this disease were to be eliminated, as it has been substantially from the experience of many lying-in hospitals, a further saving of 1,100 lives of mothers would be secured annually in England and Wales.

Scotland, Wales, and Ireland all show a higher mortality from childbearing than England. In Scotland one mother dies as a result of childbearing to every 175 registered births, in Wales one mother to every 179 births, in Ireland one mother to every 191, and in England one mother to every 259. The rates differ widely, however, in different parts of England and Wales. Welsh counties have the highest rates, and the north of England shows a higher rate than the midland or the southern counties. In general country districts show a higher rate than cities, but some of the agricultural counties show a rate as low or even lower than that which holds in London. Comparing the rates in different localities the report concludes that—

A study of the incidence of mortality from childbearing in different counties, and still more of the extreme variations in this mortality in the county boroughs in individual geographical counties, shows that special local factors, other than topographical, must be chiefly concerned in causing local excesses of mortality from childbearing.



The third part of the report takes up the several factors which might account for the rate of maternal mortality and attempts to see how far the existing rates may be assigned to any or all of these factors. The connection between stillbirths and a high rate of maternal mortality is difficult to establish, partly owing to divergences in the completeness with which stillbirths are reported in different parts of the country. The connection between infant mortality in the first week after birth and maternal mortality is usually though not always apparent, these two rates generally rising and falling together.

Can a high mortality rate be traced to the employment of midwives instead of doctors? For 30 towns it was possible to calculate the proportion of registered births attended by midwives. These towns were divided into three groups, the first including 10 towns in which midwives attended from 75 to 100 per cent of the births, the second 11 towns in which they attended from 40 to 60 per cent, and the third 8 towns in which they attended less than 40 per cent. In the first group 30 per cent of the towns showed a higher mortality in childbirth than that prevailing in the country generally, in the second group 72.7 per cent showed this unfavorable maternal death rate, while in the third group 75 per cent exceeded the rate for the country in general. In these towns the maternal death rate seems to rise almost directly in proportion to the extent of medical, as distinguished from midwifery attendance, a somewhat disconcerting situation. It can not be explained on the ground that cases which develop unfavorable symptoms are turned over to the doctors, thereby decreasing unfairly the proportion of deaths among midwife practice, since in this particular instance such cases are still listed as under midwife attendance, and the death rate, being per 1,000 living births, is not affected by the detail of whether at the time of death the patient was under one kind of care or the other. There seems abundant ground for the conclusion reached by the report:

Although the apparent relationships shown above have been given in tabular form, they do not themselves justify any general conclusion as to relationship between mortality in childbearing and attendance in confinement by midwives or doctors. Much more minute local investigation is required in each county and county borough concerned.

The birth rate and the extent of illegitimacy, as factors affecting maternal mortality in childbearing, are both dismissed with brief discussion, the data in each case being insufficient for a satisfactory conclusion. As to the birth rate it is said:

The subject needs to be further studied in the light of fertility figures and of a comparison of large and small families; but meanwhile it can not be said that either a low or a high birth rate shows any marked influence on the maternal rate of mortality from childbearing.

As to illegitimacy, a comparison of its extent with that of mortality from childbearing does not show any regular relationship between the two. It is not safe to assume, however, that all the influences implied in illegitimacy are without effect in increasing maternal mortality; the presumption is that they have such an effect, but further study is needed before that effect can be definitely traced.

In its treatment of the relation between the occupation of married women and a high maternal mortality the report is rather unsatisfactory. The following paragraphs show its attitude:

A consideration of the distribution of excessive mortality from childbearing in counties and county boroughs suggests a close association between the industrial occupation of married women and an excessive toll on maternal life from childbearing.

Omitting the Welsh counties, in which this factor does not seem to be concerned in the prevalent excessive mortality from childbearing, it will be noticed that among the counties thus distinguished are Lancashire (5.33), Cheshire (5.01), and Yorks West Riding (4.62), all counties with large textile industries in them.

On the other hand, Westmoreland (5.62), Herefordshire (4.95), Cumberland (4.69), and Devon and Cornwall (4.59), also with excessive mortality from childbearing, have few or no textile industries.

The implication is, of course, that since married women are often employed in textile industries, while it is not so common for them to be employed industrially in other pursuits, the coincidence of a large textile industry with a high maternal death rate shows the undesirability of industrial employment for married women, and the fact that three out of eight counties showing an excessive maternal mortality are textile centers is looked upon as establishing the connection. Women may evidently be employed away from home in other than textile industries, and if there is as large a maternal mortality where textile industries are wanting as where they flourish, the connection between textile operations and the death rate can not be looked upon as strongly suggested. If the maternal death rate is as large where relatively few women are employed away from home as where relatively many are, the connection between the occupation of married women and an excessive maternal mortality can not be looked upon as established unless some other factor is known to enter in where the proportion employed away from home is small. A comparison of the two groups of counties having the lowest and the highest maternal death rates, according to the percentage of married women employed away from home, should throw some light upon these points. Omitting the Welsh counties, in which the maternal death rate is very high, and in which there is no suggestion that the industrial employment of married women has anything to do with the matter, these two groups of counties are as follows:

## COMPARISON OF COUNTIES HAVING HIGHEST AND LOWEST MATERNAL DEATH RATES, AND PERCENTAGE OF MARRIED WOMEN EMPLOYED AWAY FROM HOME.

County.	Deaths per 1,000 living births.	Percent- age of married women employed away from home. <sup>1</sup>
Westmoreland.....	5.62	7.1
Lancashire.....	5.33	18.8
Cheshire.....	5.01	11.8
Herefordshire.....	4.95	7.3
Cumberland.....	4.69	5.3
Yorks West Riding.....	4.62	9.3
Devon.....	4.60	8.8
Cornwall.....	4.56	4.7
Rutland.....	1.87	5.9
Peterborough.....	1.92	5.1
Ely, Isle of.....	2.03	6.1
Oxford.....	2.49	8.1
Sussex, West.....	2.89	7.8
Buckingham.....	2.90	7.3
Wight, Isle of.....	2.98	7.6
Worcester.....	3.37	11.1

<sup>1</sup> From English Census of 1911, Occupations, Part I Table 15 (B), p. 424 et seq. Widows are not included among these married women.

This shows a marked lack of connection between the two factors. Lancashire, a textile county with two and a half times as large a proportion of its married women employed as Westmoreland, a non-textile county, shows a somewhat lower rate of maternal mortality. In Herefordshire and Buckingham exactly the same proportions of married women are employed, but the death rate in Herefordshire is 70.7 per cent higher than in Buckingham. Buckingham, again, shows a slightly higher proportion of employment among its married women than Westmoreland, yet in the latter county the death rate in childbearing is 93.8 per cent higher than in Buckingham. Cumberland has a smaller proportion of employment among its married women than Rutland, yet its maternal death rate is 150.8 per cent higher. These facts do not show, of course, that there is no connection between the industrial employment of women and a high mortality in childbearing, but they certainly do show that the mere fact that three counties in which textile industries flourish have a high mortality rate is not enough to "suggest a close association between the industrial occupation of married women and an excessive toll on maternal life from childbearing."

The same connection, it is asserted, is more plainly seen in the statistics for towns, and in order to show this, the data for 25 selected towns are given. In the first group, numbering 9, the mortality from childbearing is over 6 to 1,000 living births; in the next group of 7 it is 5 but under 6; and in the third group of 9 it is under 5.



The extent of the textile employment of women and of the non-domestic employment of married women in these towns is as follows:

EXTENT OF TEXTILE EMPLOYMENT OF WOMEN AND OF NONDOMESTIC EMPLOYMENT OF MARRIED WOMEN AND MORTALITY FROM CHILDBIRTH IN 25 SELECTED TOWNS.

Town.	Number of single and married females aged 10 and over engaged in textile industries.	Per centage of total females at these ages employed in textile industries.	Per centage of total married and widowed women engaged in all nondomestic industries.	Total mortality from childbearing per 1,000 births.
Dewsbury.....	5,274	22	19	8.54
Rochdale.....	13,592	34	28	7.21
Burnley.....	19,955	44	40	6.57
Blackburn.....	25,930	44	43	6.55
Bury.....	8,446	32	31	6.49
Halifax.....	11,078	24	16	6.23
Merthyr Tydfil.....	23	.....	6	6.11
Huddersfield.....	10,194	21	16	6.07
Oldham.....	20,104	32	25	6.06
Barnsley.....	643	7	10	5.81
Preston.....	19,027	37	35	5.78
Blackpool.....	152	1	25	5.58
Bradford.....	35,575	27	21	5.58
Newport (Monmouthshire).....	30	.....	8	5.28
Stockport.....	10,210	22	24	5.18
Swansea.....	102	.....	8	5.08
Nottingham.....	21,888	19	26	3.79
Leicester.....	15,267	15	28	4.23
Bolton.....	21,897	28	17	3.89
Wigan.....	6,215	18	12	3.78
Warrington.....	2,206	8	11	4.34
Leeds.....	10,478	6	16	4.86
Manchester.....	16,816	6	19	3.87
Salford.....	9,506	10	18	3.86
Liverpool.....	2,320	1	14	3.61

Here, again, the situation is decidedly mixed. As between textile and nontextile towns, it is to be observed that Preston, a textile town, with 35 per cent of its married women industrially employed, has a somewhat lower maternal death rate than Merthyr Tydfil, a nontextile town, with only 6 per cent of its married women at work; Barnsley, a nontextile town, with 10 per cent of its married women at work, has a death rate higher by 53.3 per cent than Nottingham, a textile town, with 26 per cent of its married women employed; and Blackpool, a nontextile town, with 25 per cent of its married women at work, has a maternal death rate higher by 31.9 per cent than Leicester, a textile town, with 28 per cent of its married women working. As among textile towns, there seems no relation between the proportion of married women at work and the maternal death rate. Dewsbury, with 19 per cent of its married women employed, has a death rate higher by 30.4 per cent than Blackburn, with 43 per cent of its married women at work; Rochdale and Leicester each have 28 per cent of their married women at work, but the death rate of the former exceeds that of the latter by 70.4 per cent; and Halifax, with 16 per cent of its married women at work, has a ma-

ternal death rate 60 per cent higher than that of Bolton, where 17 per cent of the married women are at work outside of their homes.

If, leaving the question of textile or nontextile employment, the question of the relation between employment of married women and maternal mortality is taken up, the situation is no less chaotic. The general tables show that Sunderland, with only 8 per cent of its married women at work, has a maternal mortality of 4.80, while Dudley with 12 per cent and Oxford with 17 per cent of their married women employed, have maternal mortality rates of 1.88 and 2.03, respectively. In six towns 7 per cent of the married women are employed; for these the maternal death rates are 3.24, 3.87, 3.88, 4.05, 4.08, and 4.67. Twenty towns have a mortality of more than 4 but under 5 per 1,000 living births. In seven of these less than 10 per cent of their married women are at work; in eight 10 per cent but under 15 per cent are working; in three 16 per cent work; in one 23 per cent; and in the last 28 per cent. In this last town the death rate in childbearing is distinctly smaller than in three of the towns in which less than 10 per cent of the married women are at work. Of the 10 towns having the lowest maternal death rate not one has less than 11 per cent of its married women at work, two have 10 per cent but less than 15 per cent, seven have 15 but less than 20 per cent, and one has 21 per cent employed.

It is difficult to draw any conclusion from these figures. They certainly do not prove a connection between the occupation of married women and their death rate in childbearing, yet in some towns a high rate in each of these two respects does appear, while in others a high rate in one respect coincides with a low rate in the other. Can the occasional coincidence be held to have more significance than the occasional lack of coincidence? Dr. Newsholme admits that the situation is inconclusive to the last degree, yet he is unwilling to give up the idea of a connection.

No completely consistent relationship between excessive mortality from child bearing and a high degree of employment in factories is visible in these tables, though it can scarcely be doubted that a close association exists between the two factors. It would appear that the influence of factory work, or of some manner of life or conduct associated with factory work, operates to a much greater extent in some textile towns than in others.

One possible cause, apart from the direct influence of factory work, is suggested as being possibly influential in causing the high mortality rate found in some of the textile towns listed in the above table:

The indirect as well as the direct effect of employment in factories of married women needs consideration. The desire not to incur the pecuniary loss incurred by temporary absence from work during pregnancy and after confinement in some instances may form a powerful inducement to the use of mechanical or chemical abortifacients. The suspicion that this practice is prevalent in certain quarters has already been mentioned.

In regard to this, it is evident that the pecuniary loss incurred by a temporary stoppage of work is not so great as the added expense involved in supporting another child until it reaches working age, so that if a woman had no scruples against abortifacients the strongest temptation to their use would be the desire to limit her family, and this desire might operate quite as strongly among the women at home as among those industrially employed. Elsewhere in the report it is intimated that this is the case:

The main fact is that the size of families has been reduced, largely and probably chiefly in consequence of intentional restriction of childbearing. In some areas this result has been brought about to a minor degree, by the administration of abortifacients. (p. 16) \* \* \* The data so far available do not admit of dogmatic statements as to the exact nature of this relationship (between factory work for women and excessive mortality from childbearing). There is considerable evidence that the use of abortifacients may have an unfavorable influence, but the use of these does not appear to be confined to textile districts. (p. 10.)

One interesting fact which is not included in the discussion is the excessive mortality from puerperal fever found in many, though not in all, of the towns having an abnormal maternal mortality. Deaths from this cause can not be even remotely associated with the industrial employment of women; practically without exception they are due to controllable conditions connected with the confinement. Of the 25 towns given in the table on page 80, 19 had a mortality from puerperal fever higher than that in the country generally, the excess varying from an inconsiderable fraction to 100 per cent or more. Six towns had a mortality from this cause lower than that of the country generally, and 4 of the towns fell below the average maternal death rate for all causes. For the 10 towns having the highest maternal death rate from all causes the following table shows the extent to which this excessive rate was due to puerperal fever:

PER CENT OF EXCESS OF DEATH RATE FROM PUERPERAL FEVER AND FROM OTHER COMPLICATIONS IN SPECIFIED TOWNS OVER SIMILAR RATES FOR ENGLAND AND WALES.

Town.	Death rate per 1,000 births from puerperal fever.	Per cent excess over same rate for England and Wales.	Death rate per 1,000 births from other complications.	Per cent excess over same rate for England and Wales.
Dewsbury.....	2.44	73.0	6.10	135.5
Rochdale.....	2.49	76.6	4.72	82.9
Burnley.....	2.19	55.3	4.38	69.1
Blackburn.....	2.39	69.5	4.16	60.6
Bury.....	2.72	92.9	3.77	45.6
Halifax.....	1.22	<sup>1</sup> 13.5	5.01	93.4
Merthyr Tydfil.....	1.97	39.7	4.14	59.8
Huddersfield.....	1.55	9.9	4.52	74.5
Oldham.....	2.96	109.9	3.10	19.7
Barnsley.....	2.04	44.7	3.77	45.6

<sup>1</sup> Below general rate.



The excess in deaths from puerperal fever does not account for the whole excess of maternal mortality in these towns; in several instances it accounts for only a small proportion of that excess, or even, as in the case of Halifax, for none at all. Nevertheless, it is a very important element in making up the excessive death rate found in these towns. But puerperal fever means some lack of skill or cleanliness in the care given a woman at the time of her confinement. It is not unreasonable to suppose that where this lack is great enough to cause the excessive death rate shown above it is also responsible for some part of the deaths from other complications, and that under more skillful handling the death rate from this cause also might have been reduced; in other words, that poor or improper attendance is one of the most important causes of the high death rate found in these towns. The connection, like that between the occupation of married women and the death rate, is not proved, but is at least suggested.

The real situation seems to be that the maternal death rate is a complex, and that so little is known of the different factors making it up that it is useless trying to assign their respective weights. As a matter of reason and common sense most persons would assent to the proposition that, other things being equal, it is very probable that work in factories during pregnancy is undesirable, but the facts given in this report do not afford any statistical basis for this view. In this respect, as in regard to midwifery versus medical attendance, much further study is required before authoritative statements can be made.

The relation between general sanitary conditions and maternal mortality is discussed, but the evidence that there is any causal connection between the two is considered insufficient. In some places in which sanitary conditions are bad maternal mortality is high, in others it is below the general level.

General experience, apart from statistical evidence, appears to point to the conclusion that the differences are caused in the main by differences in availability of skilled assistance when needed in pregnancy, and at and after childbirth.

The fourth part of the report is devoted to discussion of measures for making such assistance more generally available. The establishment of maternity centers is recommended, the extension of antenatal work, especially by means of clinics and home visiting, hospital provision for the treatment of puerperal fever, improved methods of diagnosis, and the collection of statistics of hospital experience. The distribution and supervision of midwives is also discussed at some length. Quite incidentally, a remark of considerable significance is thrown in:

There can be no doubt that already the maternity benefit under the national insurance act—although no conditions which would be beneficial to the recipient

are imposed—has meant in a large number of homes better care in maternity than was previously practicable.

If early resort of insured mothers or the wives of insured persons to an antenatal clinic could be secured, illness during pregnancy might be prevented or minimized, and the sickness claims on behalf of pregnant occupied women greatly reduced.

#### DEATH RATES AND AVERAGE AGE AT DEATH AMONG MEMBERS OF CERTAIN TRADE-UNION BENEFIT FUNDS.

The bureau has received recently a number of inquiries in regard to the length of life of workmen in various occupations, made apparently in the belief that such figures, if available, would measure accurately the relative health injurious effects to the workers of employment in the occupations represented.

In connection with the bureau's study of workmen's insurance and benefit funds in the United States, printed as its Twenty-third Annual Report, the facts available in the records of trade-union benefit funds as to the age at death, cause of death, etc., of members dying during the years covered were secured, and the summary results of the tabulation of this material are presented herewith. There are shown for each trade-union benefit fund the average age at death, annual death rate per 1,000 members, and the per cent of total deaths due to specified causes. These statistics are for all ages combined, and in the case of the International Typographical Union figures are presented also by age groups and by causes in considerable detail.

In presenting this material, its defects and limited value should be pointed out. The age at death among the members of any organization or occupation depends primarily on the ages of the living members. Necessarily in a group of workers made up almost entirely of persons, say under 35 years of age, as female stenographers and typewriters, for example, the average age of those dying is certain to be low. On the other hand, in a group of doctors, for example, where the education, which is a necessary preliminary to practice, postpones entrance into the profession until 25 or 26 years of age, resulting in a relatively high average age of those in the profession, a high average age at death must be expected.

Similarly, for two occupations such as locomotive firemen and locomotive engineers the average age of membership would necessarily differ, because the engineer can not enter his occupation except after years of service as a fireman. It is plain, therefore, that if the persons engaged in these two occupations were exposed to working conditions precisely the same in all respects, a higher average age at death must be expected in the occupation with the higher average age of membership. Average age at death for two such occupations

is not of itself a satisfactory index of the injurious effect of employment in the occupation.

For the computation of death rates, which will properly represent the effect of occupation upon health, it is necessary to know not only the number of those dying at each age, but also, by ages, the number of those living among whom the deaths occur, for the customary and necessary statement of death rates shows the number dying in each age group per 1,000 living in the same age group. This form of statement is necessary because the chances of dying, and consequently the death rate, naturally increases with age, and comparisons of occupations, unless made for relatively limited age groups, may be unfair, or it will be impossible to determine the significance of the figures.

The per cent of total deaths due to each particular cause is often used when the data necessary for computing death rates based on the number of persons living are unobtainable, but in such cases, also, the statistics are not satisfactory and their significance is uncertain, unless tabulated by age groups. Figures which are quite normal, or even low, for a high-age group or for an occupation with a high-average age would be excessive and indicative of serious health hazards if found in a low-age group. All of these points should be kept in mind in comparing the statistics for the various trade-union benefit funds presented in the following table:



DEATH RATES, AVERAGE AGE AT DEATH, AND PER CENT OF TOTAL DEATHS DUE TO SPECIFIED CAUSES AMONG MEMBERS OF BENEFIT FUNDS OF CERTAIN LABOR ORGANIZATIONS.

Organization.	Period covered.	Total deaths reported.	Death rate per 1,000 members.	Average age at death.	Per cent of total deaths due to—										
					Tuber- culosis of lungs.	Pneu- monia (all forms).	Heart dis- ease.	Apo- plexy and para- lysis.	Bright's dis- ease.	Liver dis- ease.	Cancer.	Ty- phoid fever.	Sui- cides.	Acci- dents.	All other causes.
Barbers, journeymen.....	1902-1907	636	5.51	135.7	28.82	8.98	5.51	4.72	4.41	1.73	1.41	4.72	2.20	6.13	31.37
Boot and shoe workers.....	1900-1908	883	( <sup>2</sup> )	( <sup>2</sup> )	27.29	10.08	10.53	4.05	3.74	1.01	4.29	3.28	.91	9.17	25.05
Carpenters and joiners.....	1902-1907	4,845	5.94	48.5	13.68	10.71	8.46	6.88	7.64	2.18	5.90	4.87	1.84	12.86	24.68
Cigar makers.....	1890-1906	5,923	10.18	843.1	31.15	6.58	6.40	4.91	5.34	2.08	3.72	1.86	3.87	5.83	28.26
Conductors, steam railway.....	1900-1906	2,221	11.59	444.7	6.53	5.81	6.35	7.07	6.03	1.99	2.89	3.47	1.26	37.87	20.73
Electrical workers.....	1902-1907	485	4.24	32.1	16.29	4.95	2.89	1.03	3.51	.83	1.44	2.89	.41	42.05	23.71
Engineers (stationary), Amalgamated Society of.....	1873-1906	549	9.30	50.5	11.11	7.65	7.83	8.20	4.92	1.45	4.73	5.83	.73	8.55	39.00
Engineers, locomotive.....	1868-1906	6,365	12.40	746.8	7.56	4.95	7.60	7.04	5.45	1.47	2.63	3.37	.90	36.65	22.37
Firemen and engineers, locomotive.....	1904-1907	1,900	( <sup>3</sup> )	30.9	6.63	4.21	2.89	1.95	2.11	.84	1.42	8.32	1.58	55.91	14.14
Glass bottle blowers.....	1891-1908	901	( <sup>3</sup> )	41.4	31.85	7.77	9.54	4.55	5.66	2.77	2.00	3.11	1.88	9.53	21.34
Hatters.....	1888-1908	2,178	16.09	45.9	32.74	9.73	7.53	4.91	4.04	1.06	1.84	1.15	1.93	4.84	30.23
Molders, iron.....	1898-1906	2,708	( <sup>3</sup> )	( <sup>3</sup> )	22.19	19.64	7.76	4.57	5.80	2.44	3.29	3.88	1.55	9.77	19.11
Painters, decorators, and paper hangers.....	1895-1909	3,660	( <sup>3</sup> )	43.5	19.95	8.08	6.47	6.61	9.84	1.56	3.31	1.86	1.75	13.42	27.15
Printers (International Typographical Union).....	1891-1906	6,798	13.04	42.9	30.45	8.78	5.72	6.95	6.49	1.79	1.92	3.15	2.41	6.23	26.11
Printing pressmen.....	1900-1907	834	7.85	( <sup>3</sup> )	35.73	8.27	5.16	4.32	9.23	1.80	2.04	3.84	1.56	7.80	20.25
Railway employees, street and electric.....	1902-1906	421	2.87	39.1	21.24	12.41	4.78	3.34	8.31	.48	3.82	2.86	.....	17.66	25.10
Seamen, lake.....	1900-1906	592	15.76	36.7	5.98	1.79	.....	.20	.....	.20	.60	1.99	.80	47.02	42.42
Sheet Metal Workers, Amalgamated.....	1902-1906	386	5.86	42.1	27.46	8.29	7.77	3.63	5.70	2.08	2.85	3.63	2.07	18.92	17.60
Stone cutters.....	1892-1907	1,186	13.51	46.9	47.81	7.76	4.38	1.10	2.45	1.44	2.30	2.19	.59	3.91	26.07
Switchmen.....	1901-1906	489	15.17	35.5	7.77	5.11	3.06	1.64	1.64	1.43	.81	1.43	1.84	61.12	14.15
Tailors, journeymen.....	1897-1907	1,011	8.38	50.8	19.68	7.02	6.43	7.02	7.32	2.38	4.65	3.17	3.56	6.64	32.13
Telegraphers, railroad.....	1899-1906	538	4.73	33.7	22.04	6.27	3.41	3.05	4.84	1.62	1.62	11.29	3.41	15.79	26.66
Trainmen, railroad.....	1885-1906	8,656	12.19	31.2	7.32	3.74	2.16	1.21	1.74	.47	.50	4.88	.95	67.81	9.22
Woodworkers.....	1901-1906	377	4.06	42.3	23.08	8.75	6.10	2.65	6.63	3.72	5.58	4.51	3.45	9.30	26.23

<sup>1</sup> Not including 1, age not reported.

<sup>2</sup> Not reported.

<sup>3</sup> Not including 189, age not reported.

<sup>4</sup> Not including 2, age not reported.

<sup>5</sup> Not including 12, age not reported.

<sup>6</sup> Not including 3, age not reported.

<sup>7</sup> Not including 1,377, age not reported.

<sup>8</sup> Not including 47, age not reported.

<sup>9</sup> Not including 12, age not reported.

<sup>10</sup> Not including 120, age not reported.

<sup>11</sup> Not including 76, age not reported.

<sup>12</sup> Not including 14, age not reported.

<sup>13</sup> Not including 26, age not reported.

<sup>14</sup> Not including 571, age not reported.

<sup>15</sup> Not including 391, age not reported.

<sup>16</sup> Not including 2,192, age not reported.

<sup>17</sup> Not including 4, age not reported.

It will be noted that in certain occupations, notably the employees of steam railroads, the percentage of deaths due to accident is extraordinarily high, 67.81 per cent for railroad trainmen, 61.12 per cent for switchmen, 55.91 per cent for firemen, 47.02 per cent for lake seamen, 42.05 per cent for electrical workers, 37.87 per cent for railroad conductors, and 36.65 per cent for locomotive engineers. Where such a large percentage of the total deaths are due to accident, as in these occupations just mentioned, the significance of the percentages for the remaining causes of death is not readily apparent. When approximately half of all the members are removed from the occupation by fatal accidents there is not the same opportunity for the development of disease due either to occupation or to living conditions as in occupations where the accident hazard is more nearly normal.

The mortality experience shown in the foregoing table in most cases covers a considerable period of years, and it is probable that in some cases in the early years working conditions were not as favorable as at the present time. That such is the case among the members of the International Typographical Union is apparent from a detailed analysis of the mortality records of the period 1893 to 1915 which has been made. The supplement to the *Typographical Journal* for August, 1915 (p. 64), shows the membership, number of deaths, the deaths per 1,000 members, the per cent of deaths due to tuberculosis, and the average age at death for each year, 1900 to 1915, inclusive. During this period the membership increased from 32,105 in 1900 to 59,571 in 1915. During this same period the per cent of deaths due to tuberculosis decreased from 31.2 to 19.1, a slight decrease occurred in the death rate, and the average age at death showed an increase of over 9½ years. These facts are shown in detail in the following table:

DEATHS PER 1,000 MEMBERS, AVERAGE AGE AT DEATH, AND PER CENT OF DEATHS DUE TO TUBERCULOSIS OF THE LUNGS AMONG MEMBERS OF THE INTERNATIONAL TYPOGRAPHICAL UNION, 1900 TO 1915.

Year.	Members.	Number deaths.	Deaths per 1,000.	Per cent of deaths due to tuberculosis.	Average age at death.
1900.....	32,105	419	13.00	31.2	41.25
1901.....	34,948	406	11.60	32.9	41.94
1902.....	<sup>1</sup> 38,364	474	12.35	31.2	42.94
1903.....	42,436	476	11.21	24.7	42.62
1904.....	<sup>2</sup> 46,165	578	12.52	19.8	45.50
1905.....	46,734	567	12.13	25.7	45.26
1906.....	44,980	512	11.40	25.2	44.02
1907.....	42,357	561	13.20	24.2	46.07
1908.....	43,740	538	12.30	23.8	45.05
1909.....	44,921	509	11.50	22.8	46.09
1910.....	47,848	574	12.00	22.5	46.07
1911.....	51,095	639	12.50	18.7	49.12
1912.....	53,807	655	12.50	21.3	48.09
1913.....	55,614	687	12.30	19.1	49.24
1914.....	58,537	713	12.18	15.9	48.70
1915.....	59,571	696	11.70	19.1	50.84

<sup>1</sup> Including stereotypers and electrotypers, 7 months.

<sup>2</sup> Including photo-engravers, 7 months.

It is evident from this table that some important improvement in working conditions within this period is the cause of this marked improvement in the mortality experience among members of the International Typographical Union. The increase in membership within the period, accompanying a large expansion in the printing and publishing industry, has resulted in the entrance into the industry of many new workers, probably with a lowering of the average age of membership. A lowering of the average age of membership, however, would tend, temporarily at least, to reduce the death rate and the average age at death. The supplement to the *Typographical Journal*, from which the figures are quoted, presents as an explanation of this improvement the introduction of a shorter workday and improved sanitary conditions in the shops, due in large part to the activity of the health committees of the organization. It is probable also that the introduction of machine composition and the consequent reduction of lead poisoning has contributed in bringing about this improvement, since the indirect effects of lead poisoning among printers are far more serious than its direct effect as a primary cause of death.

The table which follows gives the number of deaths due to all causes, the number of deaths due to tuberculosis, and the percentage of total deaths due to tuberculosis, by age groups, for the period 1893 to 1915. The figures are given for five-year periods except for 1913 to 1915, in order to eliminate the irregularities of individual years. The total number of deaths covered by the table is 11,746.

NUMBER OF DEATHS DUE TO ALL CAUSES AND NUMBER AND PER CENT DUE TO TUBERCULOSIS AMONG MEMBERS OF INTERNATIONAL TYPOGRAPHICAL UNION BY AGE GROUPS, 1893 TO 1915.

Period.	Deaths due to all causes.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	218	646	512	303	218	164	2,061
1898 to 1902.....	101	617	543	334	254	222	2,071
1903 to 1907.....	114	576	722	557	390	333	2,692
1908 to 1912.....	111	450	720	658	437	485	2,861
1913 to 1915.....	69	261	471	511	379	370	2,061
Total.....	613	2,550	2,968	2,363	1,678	1,574	11,746
Period.	Deaths due to tuberculosis.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	106	348	175	86	25	8	748
1898 to 1902.....	47	300	204	66	19	15	651
1903 to 1907.....	37	255	235	80	28	10	645
1908 to 1912.....	47	193	227	112	32	8	619
1913 to 1915.....	22	95	137	81	27	7	369
Total.....	259	1,191	978	425	131	48	3,032
Period.	Per cent of total deaths due to tuberculosis.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	48.6	53.9	34.2	28.4	11.5	4.9	36.3
1898 to 1902.....	46.5	48.6	37.6	19.8	7.5	6.8	31.4
1903 to 1907.....	32.5	44.3	32.5	14.4	7.2	3.0	24.0
1908 to 1912.....	42.3	42.9	31.5	17.0	7.3	1.7	21.6
1913 to 1915.....	31.9	36.4	29.1	15.9	7.1	1.9	17.9
Total.....	42.3	46.7	33.0	18.0	7.8	3.1	25.8



A study of the table shows that for all age groups combined the percentage of deaths due to tuberculosis has declined from 36.5 in the 5-year period, 1893 to 1897, to 17.9 in the 3-year period, 1913 to 1915. Marked reductions are apparent in every age group.

A further table shows the per cent of total deaths due to each specified cause among members of the International Typographical Union for the same period, 1893 to 1915. The percentages are given in a form similar to that used in the foregoing table. One of the difficulties of the percentage method of presenting mortality statistics must be borne in mind in studying this table. The reduction of the per cent of total deaths due to tuberculosis from 36.3 to 17.9 in the period covered means the transfer of 18.4 per cent of the deaths from this cause to other causes shown in the table. This is obvious from the very fact that the total of all deaths expressed as 100 per cent is taken as a basis for all the computations.

PER CENT OF TOTAL DEATHS DUE TO SPECIFIED CAUSES, AMONG MEMBERS OF INTERNATIONAL TYPOGRAPHICAL UNION, BY AGE GROUPS, 1893 TO 1915.

Period.	Per cent of total deaths due to—						
	Tuberculosis of the lungs.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	48.6	53.9	34.2	28.4	11.5	4.9	36.3
1898 to 1902.....	46.5	48.6	37.6	19.8	7.5	6.8	31.4
1903 to 1907.....	32.5	44.3	32.5	14.4	7.2	3.0	24.0
1908 to 1912.....	42.3	42.9	31.5	17.0	7.3	1.7	21.6
1913 to 1915.....	31.9	36.4	29.1	15.9	7.1	1.9	17.9
Total.....	42.3	46.7	33.0	18.0	7.8	3.1	25.8
Period.	Pneumonia.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	7.8	5.3	8.6	8.6	9.2	9.1	7.6
1898 to 1902.....	9.9	7.1	8.7	9.9	11.0	5.9	8.5
1903 to 1907.....	11.4	9.4	9.0	10.6	10.3	8.7	9.6
1908 to 1912.....	5.4	7.8	8.6	7.9	10.6	9.0	8.6
1913 to 1915.....	2.9	5.4	8.3	8.6	6.6	11.1	8.0
Total.....	7.8	7.1	8.7	9.1	9.5	9.0	8.5
Period.	Other respiratory diseases.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	1.4	2.8	4.3	2.0	1.8	7.1	6.5
1898 to 1902.....	3.0	3.1	2.8	3.9	8.3	5.0	4.0
1903 to 1907.....	2.6	2.3	2.2	2.9	4.1	4.8	3.0
1908 to 1912.....	.9	.9	2.9	2.9	3.0	4.7	2.8
1913 to 1915.....	2.9	1.5	.4	2.0	2.9	2.7	2.0
Total.....	2.0	2.3	2.6	2.7	3.9	4.6	3.6
Period.	Heart disease.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	2.3	2.8	4.5	5.9	9.2	6.7	4.6
1898 to 1902.....	1.0	3.7	4.8	6.6	11.8	9.0	5.9
1903 to 1907.....	3.5	3.8	5.1	8.3	13.3	14.4	7.8
1908 to 1912.....	3.6	6.0	7.5	11.7	14.9	17.3	10.9
1913 to 1915.....	5.8	5.7	7.6	10.2	14.2	13.8	10.3
Total.....	2.9	4.1	5.9	9.1	13.2	13.6	8.0

## 90 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

PER CENT OF TOTAL DEATHS DUE TO SPECIFIED CAUSES, AMONG MEMBERS OF INTERNATIONAL TYPOGRAPHICAL UNION, BY AGE GROUPS, 1893 TO 1915—Concld.

Period.	Per cent of total deaths due to—						
	Apoplexy and paralysis.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	2.3	1.7	5.1	8.9	14.2	22.6	6.6
1898 to 1902.....	2.0	1.9	3.9	11.1	11.8	18.0	6.9
1903 to 1907.....	.9	2.3	5.0	8.3	14.1	15.3	7.5
1908 to 1912.....	.9	2.9	4.7	6.7	11.9	12.6	7.2
1913 to 1915.....	5.8	3.1	6.6	10.6	13.5	17.0	10.2
Total.....	2.1	2.2	5.0	8.8	13.1	16.0	7.6
Period.	Bright's disease and nephritis.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	1.4	1.4	5.5	5.0	10.1	7.9	4.4
1898 to 1902.....	4.0	4.5	6.1	8.4	12.2	10.8	7.1
1903 to 1907.....	4.4	3.1	6.4	11.1	10.8	14.4	8.2
1908 to 1912.....	.9	3.8	7.1	9.6	14.2	12.8	8.9
1913 to 1915.....	2.9	3.8	7.0	10.4	10.0	10.5	8.5
Total.....	2.7	3.2	6.4	9.4	11.6	11.8	7.6
Period.	Diseases of digestive system.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	4.2	6.2	5.8	5.0	6.0	6.7	5.7
1898 to 1902.....	7.9	3.6	4.8	7.5	5.9	5.9	5.3
1903 to 1907.....	7.9	3.8	6.3	9.5	6.9	4.8	6.4
1908 to 1912.....	7.2	5.3	6.3	10.2	6.7	5.6	7.0
1913 to 1915.....	7.2	6.8	9.1	8.2	6.1	5.1	7.3
Total.....	6.5	5.0	6.4	8.5	6.4	5.5	6.4
Period.	Cancer.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....		0.2	2.1	3.6	2.3	2.4	1.6
1898 to 1902.....		.8	1.7	3.3	2.8	3.6	1.9
1903 to 1907.....		.5	1.8	3.6	4.1	3.9	2.4
1908 to 1912.....	1.8	.9	1.9	5.0	6.9	7.4	4.2
1913 to 1915.....	1.4	.4	2.3	3.7	7.1	4.3	3.6
Total.....	.5	.5	2.0	4.0	5.1	4.9	2.8
Period.	Accident.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	8.3	7.3	7.0	6.6	4.6	1.2	6.5
1898 to 1902.....	5.9	5.0	6.3	6.6	3.9	2.7	5.3
1903 to 1907.....	5.3	8.7	7.5	6.6	6.4	1.8	6.6
1908 to 1912.....	10.8	7.3	7.4	4.1	2.5	2.5	5.2
1913 to 1915.....	14.5	9.2	4.9	4.3	3.7	3.8	5.2
Total.....	8.5	7.3	6.7	5.4	4.2	2.5	5.7
Period.	All other causes.						
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
	15 to 24 years.	25 to 34 years.	35 to 44 years.	45 to 54 years.	55 to 64 years.	65 years and over.	Total.
1893 to 1897.....	23.9	18.8	22.7	26.1	32.3	31.0	23.7
1898 to 1902.....	19.8	21.6	23.6	23.1	24.9	32.5	23.8
1903 to 1907.....	32.6	21.8	24.0	24.9	22.8	28.8	24.5
1908 to 1912.....	26.1	22.3	22.0	25.1	21.8	26.4	23.6
1913 to 1915.....	24.6	27.7	24.6	26.3	28.8	29.7	27.1
Total.....	25.2	21.6	23.3	25.0	25.3	29.1	24.4

From a study of this table there is indicated no change in the percentage of deaths due to accident and to pneumonia, a marked decline in the deaths due to other respiratory diseases, and an apparent increase in the percentage of deaths due to heart disease, apoplexy and paralysis, Bright's disease and nephritis, diseases of the digestive system, and cancer.

A careful comparison of the causes of death in the earlier and later years of the period covered in the above table shows that what has actually happened in recent years is that as an increasing proportion of the printers have reached old age they have in increasing numbers become subject to and have died of diseases of age—heart disease, apoplexy and paralysis, and Bright's disease and nephritis—but an increasing proportion of the deaths which are due to these diseases have occurred at advanced ages. This will be seen quite clearly in the table which follows. Thus, in the period 1893 to 1897, 48.4 per cent of the deaths due to heart disease were deaths of printers under 45 years of age, and only 32.7 per cent occurred at 55 years or over. In 1913 to 1915, the last period shown, however, only 26 per cent of the deaths from heart disease were under 45 years, and 49.6 per cent were in the group 55 years and over. A similar shifting of the deaths from old-age causes from the younger to the older age groups is shown in the table.

PER CENT OF TOTAL DEATHS DUE TO SPECIFIED CAUSE WHICH WERE IN AGE GROUPS UNDER 45 YEARS AND 55 YEARS AND OVER. 1893 TO 1915.

Cause of death and age group.	1893 to 1897.	1898 to 1902.	1903 to 1907.	1908 to 1912.	1913 to 1915.
Heart disease:					
Under 45 years.....	48.4	40.9	30.1	27.4	26.0
55 years and over.....	32.7	41.0	47.9	47.9	49.6
Apoplexy and paralysis:					
Under 45 years.....	30.6	24.7	24.7	23.4	20.4
55 years and over.....	49.6	49.3	52.4	55.2	54.1
Bright's disease and nephritis:					
Under 45 years.....	44.4	43.9	31.1	26.9	25.7
55 years and over.....	38.8	37.1	40.7	48.4	44.0
Diseases of digestive system:					
Under 45 years.....	66.9	51.4	44.5	38.8	44.0
55 years and over.....	20.3	25.7	24.8	27.8	28.0



## DISEASES OF OCCUPATION AND VOCATIONAL HYGIENE.

In a volume entitled "Diseases of Occupation and Vocational Hygiene"<sup>1</sup> the editors, Dr. George M. Kober, of Washington, and Dr. William C. Hanson, of Belmont, Mass., have presented a work which is intended to be a "safe and convenient guide to all who may be interested in the study of occupational diseases"—to physicians, employers, employees, efficiency experts, public-health officials, and legislators—in the hope that as a knowledge of the character, gravity, causes, and prevention of these diseases is diffused, corrective and preventive action may be expected. In the prefatory note the editors trace the development, both in Europe and America, of the modern factory system which has led to a large increase in the incidence and importance of occupational diseases, calling special attention to the interest manifested in occupational-disease hazards in this country, as evidenced by the fact that many careful and detailed studies have been made of the subject by private investigators and by those under direction of governmental authority and various State commissions. The establishment in 14 European cities of safety museums is noted, special mention being made of the one in Charlottenburg, Germany, in which may be seen in practical operation every safety appliance which inventive genius has devised. Reference is also made to the museum of safety in New York City, which is devoted "to the safety, health, and welfare of industrial workers and the technique and science of industry," and to the organization of various instrumentalities, notably the National Safety Council, the American Public Health Association, and the United States Public Health Service, which, through their sections and divisions on industrial hygiene, are endeavoring to promote safety and the study of industrial diseases.

The subject matter in the volume under review is grouped in three parts. Part I deals with specific and systemic diseases of occupation, fatigue, and neuroses, and is intended primarily to meet the needs of "medical and legal experts, medical examiners, insurance examiners, practicing physicians, teachers, students, and others desiring accurate and scientific information relating to the pathology, symptomatology, and treatment of diseases of occupation."

In Part II the editors present the causation and prevention of occupational diseases and accidents with a view to offering helpful information for the guidance of employers, employees, public-health officials, nurses and social workers, legislators, and others actively interested in the prevention of avoidable occupational hazards. This

<sup>1</sup> Diseases of Occupation and Vocational Hygiene, edited by George M. Kober, M. D., and William C. Hanson, M. D. Philadelphia, P. Blakiston's Son & Co., 1012 Walnut Street. [1916] 918 pp. Illustrated.

portion of the volume contains a list of industrial poisons and a list of industries and processes in which poisoning may occur, reproduced from Bulletin 100 of the United States Bureau of Labor Statistics, and also tables of occupational mortality and morbidity statistics.

Part III has been presented essentially for those who may be called upon to investigate in the shop, the factory, in the dispensary and hospital the relations of occupation to disability and disease. "This portion has been framed, too, in the hope that it may stimulate the teachers of the coming generation of physicians to impart to their pupils a better knowledge of occupational diseases and their prevention, which, after all, is of more economic importance than their cure."

As indicating the scope of the work undertaken by Drs. Kober and Hanson, a brief summary of the contents may be given.

The subject matter in Part I is presented under six general divisions: Specific occupational diseases, including occupational intoxications, occupational infectious diseases, compressed-air illness, and effects of diminished atmosphere upon health. Systemic occupational diseases, including dust diseases of the lungs, and diseases of the blood, circulatory system, and kidneys; fatigue and occupation, including occupation neuroses; occupational affections of the nose, mouth, throat, eye, and ear; occupational affections of the skin, including cancer; and electrical injuries and electrical shock.

Two divisions make up Part II, one on the etiology and prophylaxis of occupational diseases, and the other on vocational hygiene, that is, occupations involving exposure to conditions injurious to health. In this division special mention is made of processes involving exposure to occupational intoxications, and to processes involving exposure to occupational infectious diseases. This latter group includes chapters on the following subjects: Hide tanning and allied industries; the jewelry and allied industries; iron, steel, and allied industries; the printing and publishing industry; mining and quarrying, and allied industries; the button, horn, celluloid, and allied industries; the textile and allied industries; the boot and shoe industry; tailors, garment, and laundry workers; the rag, shoddy, and paper industry; farmers, gardeners, planters, and farm laborers; the lumber industry; occupations involving exposure to the inhalation of organic gases, etc.; the industry of foodstuffs, etc.; and liberal professions, etc. As already stated, Part II includes a list of industrial poisons, taken from Bulletin 100 of the United States Bureau of Labor Statistics, and a list of industries and processes in which poisoning may occur, with a designation of the industrial poison caused by working in each specified industry.

The relation of clinics, statistics, governmental study, and legislation to occupational diseases is the title of Part III. Division 1 gives the function of clinics in the prevention of occupational diseases, with an account of the origin, purposes, and activities of the Milan clinic, the first one established. Division 2 contains an article on mortality from pulmonary tuberculosis in dusty occupations and one on the use and the fallacies of statistics. Legislation and governmental study for the prevention of occupational diseases is the subject of the third division. Here chapters by special contributors are presented under the following captions: Methods and scope of legislation; The notification of occupational diseases; The protection and the promotion of women wage earners; The exclusion of minors from injurious and dangerous occupations; The work of labor and health boards and of legislative commissions; Effective legislation and administration. The following from the chapter on methods and scope of legislation, by Dr. John B. Andrews, may be taken as indicating the trend of the articles in this division:

Future labor legislation and court decisions which mark the path of social progress will be based upon scientific study of industrial hygiene. Only through careful study can we secure accurate information which will finally enable us to establish scientific standards. The establishment of such standards is prerequisite to intelligent legislation, to enlightened court opinion, and to efficient enforcement of the law.

While such researches are underway we should emphasize at every opportunity the following considerations: (1) All preventable occupational diseases must be prevented; (2) those occupational diseases which we do not yet know how to prevent must be reduced to a minimum; and (3) the victims of occupational disease must be compensated for their injuries by some just system of insurance.

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#### WORK OF THE JOINT BOARD OF SANITARY CONTROL, NEW YORK CITY.

The joint board of sanitary control was organized October 31, 1910, to establish standards of sanitary conditions in the cloak, suit, and skirt industry in New York City, its operations being extended in March, 1913, to include the dress and waist industry. It is one of the institutions created by the protocol of peace<sup>1</sup> entered into after the strike of the summer of 1910 between the Cloak, Suit, and Skirt Manufacturers' Protective Association and the unions comprising the cloak, suit, and skirt locals of the International Ladies' Garment Workers' Union. The board reports that it exercises influence over 2,547 shops employing 73,985 workers, 76.8 per cent of the shops and 61.1 per cent of the employees being in the cloak

<sup>1</sup> A brief account of this protocol appeared in the MONTHLY REVIEW for October, 1916, pages 26 and 27.



and suit industry and 23.2 per cent of the shops and 38.9 per cent of the workers being in the dress and waist industry. In establishing standards of sanitary conditions particular attention has been given to fire protection in buildings and shops, accident prevention and care for safety of workers, abatement of sanitary nuisances and improvements of shop sanitation, educational activities among manufacturers, workers, and the general public, and disease prevention and health service, and the work accomplished along these lines during the six years is set forth in a pamphlet of 32 pages recently issued from the board's headquarters, 31 Union Square, New York City.<sup>1</sup>

According to this report there are three essential elements necessary for industrial self-control, which is the basic principle of the establishment and work of the board, namely, industrial introspection, industrial legislation, and industrial enforcement. An important achievement of the board seems to have been its thorough inspection and investigation of the sanitary and safety conditions in the industries represented to discover defects and draw the attention of employers and the public generally to the necessity for remedying them. As a result of the first inspection early in 1911, which covered 1,243 shops employing 36,941 workers, the sanitary code of the industry was established, after which the sanitary supervision of the whole industry was undertaken with the purpose of enforcing the newly adopted standards, which it is stated "are somewhat advanced and are more strict even than the State laws and municipal regulations."

The methods of enforcement used in shops belonging to members of the association were as follows: (1) Inspection; (2) notice of defect; (3) reinspection of the shop; (4) letter to employer in case the defects have not been complied with; (5) personal interview with the inspector; (6) letter from the office warning the employer, in case of noncompliance, of reference of the matter to the executive board of the association; and (7) discipline of the member by the association.

The methods of enforcement employed with independent manufacturers, i. e., those who did not belong to any association, and upon whom no pressure could be brought through the association, were somewhat different, in that the final stages of the enforcement had to be referred to the labor or fire departments, in case the defects were such as to come under the jurisdiction of these departments.

For sanitary neglect, due to the fault of the workers themselves, the methods of enforcement of our standards were necessarily based upon educational work \* \* \*. As an incentive to employers, a "sanitary certificate" was given the owners of shops free from sanitary defects.

As a result of the efforts of the board during the past six years, much progress in improving sanitary conditions and minimizing the

<sup>1</sup> Six years' Work and Progress of the Joint Board of Sanitary Control in the Cloak, Suit and Skirt, and the Dress and Waist Industries. Oct. 31, 1910, to Oct. 31, 1916. 31 Union Square, New York City. [1916.] 32 pp. Illustrated.

fire hazard has been made. The inspections have shown that some of the defects mentioned, especially those in fire protection and safety, were of a character that could be remedied by the efforts of shopowners, urged thereon by the inspectors and the director of the board. The various inspections and reinspections seemed to indicate that a great many of these defects have been actually remedied. The remedying of conditions in sanitation, however, were found to be much more difficult, especially in so far as it relates to conditions of toilets, walls, ceilings, and floors. Since at times the best intentions as well as attention of the shopowners were not sufficient to remedy these sanitary neglects, it was found necessary to draw the attention of the workers themselves to these defects and to obtain their cooperation with the employers in the practice of keeping better and more sanitary shops.

To accomplish these results an educational propaganda was carried on among employers and employees for the purpose of instructing them in the fundamental rules of safety and sanitation. A first-aid kit was devised and installed in many shops, only 267 (approximately 10 per cent) employers at the time of the inspection in September, 1916, not having supplied themselves with this equipment. The health survey disclosed a large number of physical defects among workers and "a deplorable health condition," with about 2 per cent suffering from pulmonary tuberculosis.

A scheme for joint health insurance of all workers in the industry having failed, the board induced several of the large locals to impose upon their members an annual tax of \$1 per capita for the purpose of establishing sickness and tuberculosis benefits. This made it necessary for these locals to exclude from membership all new applicants suffering with this or any other infectious disease, and a health-certificate plan was therefore adopted compelling all new candidates to undergo preliminary medical examination at the office of the board. Since the beginning of this work 17,513 examinations have been made. A tuberculosis home has been provided, to be opened in May, 1917.

With the existence of tuberculosis and sick benefit among the other branches of the union and the establishment of our own sanatorium the field will be clear for the general adoption of a health-insurance scheme by the union, which, it is hoped, will eventually become a unit of the proposed State health insurance to workers.

Having no legal jurisdiction over the owners of buildings and their agents, the board was somewhat handicapped in enforcing its standards as to fire hazard, but the report indicates a large measure of success in this direction, especially in the adoption of fire drills, which, in September, 1916, were conducted in 771 (30.2 per cent) shops, employing 41,786 (56.7 per cent) of the workers. It appears

that during the year 1916, 2,547 shops were inspected in 81 buildings; employers were notified of 771 defects, of which 506 (65.6 per cent) were found to have been remedied on reinspection. Approximately 46 per cent of the shops inspected were found to be without defects, while nearly 54 per cent had one or more defects. Of this latter number, 488, or 35.8 per cent, were defects of lighting; 267, or 19.6 per cent, had no first-aid kits; while more than half showed insanitary conditions. The following table shows the reduction of fire hazard and the improvements in sanitation in 1916, as compared with 1912 and 1911, respectively:

NUMBER AND PER CENT OF SHOPS SHOWING REDUCTION OF FIRE HAZARD, 1916 OVER 1912, AND IMPROVEMENT IN SANITATION, 1916 OVER 1911.

Item.	Number.			Per cent.		
	1911 <sup>1</sup>	1912 <sup>1</sup>	1916 <sup>2</sup>	1911	1912	1916
<b>REDUCTION OF FIRE DANGERS.</b>						
Buildings with no drop ladder to fire escapes.....		13			1.2	
Buildings with fire escapes ending in fire traps.....		42	33		4.2	<sup>3</sup> 4.0
Shops with exit to fire escape in shop obstructed.....		36	17		1.9	.7
Shops with doors opening in.....		738	148		39.1	5.8
Shops with no fire buckets.....		119	108		6.4	4.2
<b>IMPROVEMENTS IN SANITATION.</b>						
Shops having no protection from glare of lights.....	1,272		488	73.2		19.2
Shops having no dressing facilities.....	1,017		40	58.5		1.6
Shops with improper separation of water-closets.....	106		5	6.1		.2
Shops with dark water-closet apartments.....	188		45	10.8		1.8
Shops with dirty water-closets or flush out of order.....	549		205	31.0		8.0
Shops with dirty water-closet floors.....	175		178	10.1		7.0
Shops with dirty water-closet walls.....	170			9.8		
Shops with dirty ceilings.....	40			2.3		
Shops with dirty walls.....	107			6.1		
Shops with dirty windows.....	221			12.7		
Shops with dirty floors.....	568		146	32.7		5.7
Shops with no receptacle for rubbish.....	285		112	16.3		4.4

<sup>1</sup> The total number of shops inspected in 1911 and 1912 is not given in the report, but the figures indicate approximately 1,737 and 1,888, respectively.

<sup>2</sup> The total number of shops inspected was 2,547.

<sup>3</sup> This is taken from the report. On the basis of 2,547 shops inspected, the percentage should be 1.3.

### A NONPOISONOUS DOPE FOR AIRPLANES.

Attention has already been called in the pages of the Monthly Review (June, 1916, page 86; November, 1916, page 105) to the danger of poisoning from the use of dope, or varnish containing tetrachlorethane, which is applied to the wings and bodies of airplanes to render them impervious to moisture and air, and the British reports of the many cases of toxic jaundice, most of which are understood to be due to this poison, have been quoted.



A parliamentary statement made on August 8 by a representative of the British War Office and Admiralty indicated that a means has been found of doing this work without the use of the dangerous tetrachlorethane. It was stated that:

Considerable progress has been made in the production of satisfactory dopes of a nonpoisonous kind and the Admiralty and the War Office have recently issued instructions to contractors specifying various nonpoisonous dopes which meet their requirements. The effect of these instructions is that the use of dope containing tetrachlorethane is no longer permitted for the purpose of either the naval or the military air service unless the nonpoisonous dopes can not be obtained. Any cases of failure of supply of the nonpoisonous dope will be made the subject of special inquiry. Of the eight doping schemes approved, seven are supplied by the trade.

No information in regard to the constituents of these nonpoisonous dopes is available.

#### ANTHRAX IN NEW YORK STATE.

A report on the extent of anthrax in New York State, the causes of outbreaks and methods of control and eradication, is presented in a special bulletin of the Industrial Commission issued in October, 1916,<sup>1</sup> and is based upon an investigation which was prompted by the occurrence in tanneries in 1914 of several cases of skin infections and the possibility of anthrax as the cause. According to this report anthrax as a scourge to man and beast was known in early Egyptian history and it holds a place in medical history as the first disease whose cause was definitely traced to a microbic organism.

Primarily an animal disease, it frequently is transmitted to man, not in the sense that the animal is host, but that the animal is its ordinary victim, from which by accident man receives his infection. Naturally, then, is the source of human outbreaks looked for in the animal world, and the danger to man and the methods of controlling the disease sought for in his relation to animals and animal products. It is a most widespread condition, affecting cattle, sheep, horses, and men. All the herbivora are liable to it, but carnivora seem to enjoy a relative immunity. Domestic animals, cats, dogs, and pigs, have fallen victims, probably from rooting in infected soil and eating infected meat. It has been said that in the earlier epidemics wild animals, deer, and bears, died in large numbers. Laboratory animals, mice, guinea pigs, and rabbits are peculiarly susceptible. Birds generally seem to be immune.

It seems that three avenues of entrance are recognized. The bacterium may enter through an abraded skin, by inhalation (the common mode among workers in wool), and by ingestion with food, giving rise to intestinal anthrax, "a condition common among cat-

<sup>1</sup> New York. Department of Labor. Industrial Commission. Special Bulletin No. 79. Anthrax. Albany. 1916. 22 pp. Illustrated.

tle but rare in man." The development of anthrax after infection is thus described in the report:

In malignant pustule four stages of development are observed. Shortly after infection there is a burning, itching sensation at the site of inoculation, followed in from 12 to 72 hours by the appearance of a papule resembling an insect bite, giving place in from 12 to 24 hours to a definite inflammatory vesicle which rapidly becomes a serum-filled bleb. There is extensive induration of all surrounding parts, with severe constitutional symptoms. Clinically and histologically it is a serofibrinous inflammation, which leads rapidly to tissue necrosis. After one or two days the vesicle degenerates and shows a plaque about the size of a quarter dollar, with a greenish black center, around which is a circle of redness shading to purple on its outer side and pointed with small vesicles. The adjacent lymphatic glands become involved, metastatic abscesses develop, and a general toxemia supervenes, causing death from septicemia or exhaustion. Bacteria have been found in the blood, and at death the capillaries are engorged with organisms. The toxins cause a paralysis of the respiratory center and precipitate the fibrinogen, and the blood, loaded with carbon dioxide and uncoagulable, becomes black and fluid. The body quickly discolors with general purpura. Dark coffee-colored fluid escapes from the orifices. Hemorrhages may occur in the internal organs and into the cavities. The spleen is enlarged, and cloudy swelling of the kidneys and liver may be found. In severe cases the whole course, from inoculation to death, may occupy only four days. If, however, the progress of the disease is arrested, the plaque will slough, inflammation will subside, and recovery will result.

In pulmonary anthrax the lesion is found in the lower trachea and in the bronchi, and the resulting congestion is often mistaken for pneumonia. There is usually an adenitis, with edema of the neck and chest, and sometimes, though not always, cutaneous manifestations. In intestinal anthrax the eschar is located in the stomach or the small intestines. In the internal forms the lesions are analogous to the malignant pustule, the course is much more severe, and the result is usually fatal.

It has been demonstrated that anthrax infected hides and the hair and wool of animals present the greatest danger to man, tanners, farmers, and veterinarians being its chief victims. It is, therefore, regarded as extremely important that all hides be thoroughly disinfected before entering tanneries. The difficulty of procuring satisfactory disinfection, however, is recognized, since the anthrax spores seem to resist all the ordinary disinfectants. "They have been found active after passing through the tanning solutions, and this gives rise to a public danger; the tannery waste used as manure and the effluent from the vats may pollute the streams and imperil the lives of many." Thus, efforts at disinfection have taken two courses, the prevention of infected hides from entering tanneries, and the purification of the waters. The report briefly suggests the methods employed in disinfecting hides.

In New York State anthrax appears to have been prevalent among animals for many years and is "one of the chief causes of death to stock," but "the original source of infection has not been determined"

and "prompt immunization by the Department of Agriculture has undoubtedly checked its spread." Physicians are required by law to report every case of anthrax coming under their care, and the report states that in the three years prior to 1915 only six cases were so reported, four of them being fatal. However, between March 1, 1915, and April 1, 1916, 27 cases<sup>1</sup> were reported from 8 counties; 15 (55.5 per cent) of these cases were fatal. The occupations of those affected and whether they died or recovered are shown in the following table:

CASES OF ANTHRAX IN NEW YORK STATE, MAR. 1, 1915, TO APR. 1, 1916, SHOWING OCCUPATIONS OF THOSE AFFECTED.

Occupation.	Died.	Recovered.
Hide handler.....	5	9
Farmer.....		3
Butcher.....	1	
Shoemaker.....	1	
Student.....	2	
Lawyer.....	1	
Candy maker.....	1	
Unemployed.....	1	
Children.....	3	
Total.....	15	12
Per cent.....	55.5	44.5

Several methods for the treatment of anthrax are noted—surgery, including cauterization, excision, and installation of carbolic acid about the plaque, and serumtherapy or immunization. The latter, it is stated, has produced excellent results in animals, for as soon as a case of anthrax appears the other animals may be immunized; the serum is therefore protective. "With man it has a curative effect, it lessens the virulence of the infection received, but, because of the brief immunity, the severe reaction, and the possibly grave attending dangers, its use is not advised in uninfected men." This method was adopted in two of the up-State cases, both of whom recovered. "In order to be fully effective it should be used early."

But the report emphasizes the fact that "not treatment, but prophylaxis is the keynote of success."

Disinfection of fields and destruction of products, confiscation and destruction of infected hides and carcasses, and immunization of animals are agricultural methods; purification of streams is a public-health measure; the disinfection of hides, the prevention of their entrance into the tanneries when infected, and the protection of the workers are the industrial means of combating the disease.

The exclusion of hides from commerce is also suggested, this to include not only those coming from foreign countries, but those

<sup>1</sup> The report notes that three cases appeared since Apr. 1 but had not been investigated at the time the report was written.



shipped in from States where the disease has appeared. Pending the discovery of a reliable method of disinfection the danger of anthrax must be made known, declares the report, by a campaign of education, supervision, and regulation, just as the prevention of tuberculosis and tetanus has been largely forwarded by teaching the public the dangers of these diseases and how to avoid them. To effectuate such a program the medical inspectors of the industrial commission, as a result of their study of anthrax, its causes, and the methods of control and eradication in New York State, submit the following recommendations:

1. Every physician should report at once to the State industrial commission every case of anthrax coming under his care.
2. In every establishment where articles liable to be infected with anthrax are handled a competent physician should be employed.
3. In every such establishment the employer should make such special provision for the protection of his employees as the commission shall determine.
4. Every employee should be required to make use of the means provided for his safety by the employer.
5. It should be the duty of the shop foreman or superintendent to enforce the use by the employees of the means provided by the employer.
6. Attention of physicians and of the public should be called to the dangers of anthrax.
7. Cooperation with Federal and contiguous State authorities should be maintained to prevent the entrance of infected materials into commerce.

Supplementing these recommendations the report makes the following suggestions for the guidance of physicians, employers, and employees:

*The physician.*—1. He should visit the establishment every day and sign a register showing the time of his visit, this register to be subject to inspection by the State industrial commission.

2. He should examine every workman at entrance upon employment and as often thereafter as necessary. He should instruct new employees individually and the others frequently in classes in methods of preventing anthrax.

3. He should be provided with facilities for the prompt diagnosis and early treatment of anthrax. He should have charge of the first-aid kits, as approved by the commission. He should instruct foremen and others selected in the use of first aid.

4. He should keep a record of all examinations and of all treatments, such record to be subject to inspection by the commission. He should report promptly to the commission every case of anthrax, together with a record of the source of the infecting material.

*The employer.*—1. In factories the floors should be of cement or waterproofed easily washed material. The walls should be whitewashed. When a case of anthrax develops the floors should be thoroughly cleaned and the walls whitewashed. Tables, workbenches, and other articles coming in contact with materials should be washed as often as necessary with a disinfecting solution.

2. Dressing rooms, wash rooms, and lunch rooms should be provided separate from the workrooms. The dressing room should be so arranged that the working clothes may be kept separate from the street clothes. The wash rooms should be provided with basins, water, soap, individual towels, etc., as directed by the industrial code. No food should be allowed in the workrooms.

3. Where dust is evolved in the process special ventilating apparatus should be installed according to the judgment of the commission.

4. To avoid as much as possible contact with materials, suitable clothing, waterproof aprons, overalls, shoes, gloves, etc., should be provided the workmen.

5. Notices in different languages should be posted conspicuously throughout the workrooms:

(a) Requiring the use of protective clothing; requiring the use of dressing rooms and wash rooms; forbidding food in workrooms.

(b) Warning of dangers of anthrax; instructing as to methods of avoiding it; requiring the report to foremen of even slight accidents or injuries.

6. The foreman or superintendent should be held responsible for observance of the regulations.

*The employee.*—1. He should realize the danger of anthrax and the necessity of avoiding infection.

2. He should wear the clothing, and use the dressing rooms, wash rooms, and lunch rooms provided by the employer. No food should be taken into the workrooms.

3. He should report at once to the foreman even slight injuries and should follow strictly directions of the physician.

4. He should assist the foreman in enforcing the regulations.

#### MINER'S PHTHISIS ON THE WITWATERSRAND, TRANSVAAL.

On February 26, 1912, the minister of mines of the Union of South Africa, appointed the miners' phthisis committee for the purpose of conducting an experimental investigation which should aim at the elaboration, introduction, and operation of a uniform and systematic standard of the practical methods which should be applied to every form of mining work in detail, both in regard to general and local ventilation and, to dust prevention, in order to combat at every point the conditions which produce miners' phthisis. This committee, under date of March 15, 1916, submitted a general report<sup>1</sup> which, at the outset, gives the following definition of miners' phthisis, taken from the report, issued early in 1912, of the medical commission appointed to inquire into the prevalence of this disease and of pulmonary tuberculosis, as respects miners within the Union of South Africa:

Miners' phthisis is a chronic disease of the lungs, characterized by progressive fibroid changes in the lung tissue and pleura, and accompanied by chronic catarrhal processes in the air cells and respiratory passages. The disease is thus primarily a fibrosis of the lung, and the essential factor in producing this condition is the more or less continuous inhalation over long periods of fine rock dust. All true cases of miners' phthisis are thus primarily cases of silicosis; silicosis is the feature common to them all.

In the later stages tuberculosis becomes commonly or invariably superimposed upon this condition, and the type of the disease becomes that of a tuberculous infection in a fibroid lung.

<sup>1</sup> Union of South Africa. Transvaal. General Report of the Miners' Phthisis Prevention Committee. Pretoria, 1916. 199 pp.

The committee in accepting this definition emphasizes the fact that the disease begins as a silicosis, and that a lung thus affected is rendered more liable than a normal lung to intercurrent invasion by infective processes, especially tuberculosis, so that "the normal course of a case of miners' phthisis which ends fatally is to terminate as a silicosis on which an infective process, which is normally and almost invariably tuberculosis, has been superimposed." The committee, however, makes it clear that all cases of silicosis are not necessarily bound sooner or later to become tuberculous, particularly if the worker is removed from underground work, but expresses the opinion that "it is never safe for a man who has once contracted a definite silicosis to resume underground work."

The investigations of the committee were confined entirely to the Witwatersrand mining district, which is one of the largest gold-producing centers in the world. No satisfactory figures as to the prevalence of miners' phthisis seem to have been collected by the committee, but reference is made to the report of the medical commission (cited above) which in 1911 found that out of 3,136 white underground miners actually at work, 26.1 per cent showed definite signs of silicosis; 5.5 per cent were classed as probable but doubtful cases. The disease was found to fall most heavily upon machine-drill miners, 48 per cent of this group being affected as compared with 32 per cent of all miners examined. It is noted, however, that the systematic use of dust-laying appliances has served to reduce the number affected, and from data supplied by the miners' phthisis board, which shows the number of cases compensated for under the miners' phthisis act during 1915, it appears that 326 deaths were reported as having occurred among beneficiaries of this act, of which number 276 (84.7 per cent) are classed specifically as "miners' phthisis" or "silicosis" with or without tuberculosis or other diseases.

The symptoms of early silicosis are slight shortness of breath on exertion and recurrent bronchial "colds." The general health is good, the patient usually, to all appearance, looks quite well, and his working capacity is not noticeably impaired. \* \* \* As the disease progresses to the stage of developed intermediate silicosis, these symptoms very gradually increase. Irritative cough, typically a morning cough, but commonly with little or no expectoration, definite shortness of breath on exertion, a more frequent liability to slight but obstinate bronchial attacks, and flitting pleuritic pains are the features which first attract serious notice. These are the symptoms when the condition is established.

As the disease progresses to the stage of advanced silicosis, the cardinal symptom of shortness of breath becomes more urgent and distressing, the irritative cough more frequent. Expectoration may become more copious, but is still in most cases slight. The patient becomes unable to work and loses flesh. The chest is rigid and retracted, and may scarcely expand at all, even in forced inspiration; the shoulders are hunched, and the chest appears to be practically fixed in a position of partial expiration. Breathing is almost wholly



diaphragmatic. The lips are bluish, the expression anxious, the pulse rate is accelerated, and dilatation of the right side of the heart may commonly be detected. Dyspnoea is obvious, even when the patient is at rest. Moist sounds, due to œdema, may be heard at the bases. Physical signs indicative of areas of consolidation or thickened pleura are common. Death may occur after a short illness from œdema of the lungs, or from some acute pulmonary infection, or occasionally from sudden heart failure.

Having established that miners' phthisis arises from the presence in the substance of the lungs of very fine silicious particles derived from the dust-laden atmosphere which the miner breathes, the committee states that any broad policy aimed at the prevention of miners' phthisis must include two lines of action, as follows:

To prevent the formation of dust and its dissemination in the air of the mine, and where, as is the case in certain mining operations, this is impossible, to protect the workmen from inhaling the dust and also from inhaling the fumes arising from the use of explosives.

To protect the workmen, as far as possible, against the risk of infection by tuberculosis.

To this end a careful study was made of the general character of the dust occurring in silicotic lungs, in mine air, and in streets; the principal operations giving rise to dust in mine air; methods of laying dust and preventing its formation or inhalation; ventilation; and the control of tuberculosis.

The principal operations causing dust in mines are, according to the report, blasting, drilling, transport, and breaking and crushing rock. The attention of the committee was directed particularly to the conditions under which blasting operations are conducted, and "it was discovered that developers<sup>1</sup> were frequently exposed to conditions which, in the light of recent investigations, can be described as nothing less than appalling. The atmosphere of a mine is far worse at the hour of blasting than at other times, by reason both of dust and deleterious gases." The committee considered various methods of dealing with the dust generated by these mining processes with a view to preventing its formation rather than toward preventing its inhalation after formation, and came to the conclusion that "abundance of clean water, judiciously used, is generally the most satisfactory medium at present known." This applies to blasting, drilling, and transport. The most satisfactory method of dealing with dust in crusher stations, according to experiments made by the committee, is to box in the crushers and to connect them to an exhaust fan.

Since ventilation is of importance in removing the vitiated and dust-laden atmosphere from the mine, and also because defective ventilation has a lowering effect upon general health and reduces

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<sup>1</sup> That is, rock-drill miners engaged on development work, usually in drives.

the chance of resistance to disease, especially in those whose lungs may be already weakened, the committee devoted considerable attention to this phase of the investigation, and as a result emphasizes the necessity of installing a system of ventilation that will insure "that no person should have to breathe air vitiated by blasting fumes which are dangerous on account both of the dust and of the carbon monoxide and probably of small quantities of nitrous fumes as well."

The committee considers, however, that so far as the development of miners' phthisis is concerned, exposure to nitrous fumes produced by blasting operations is a greater danger than that of possible chronic poisoning by carbon monoxide.

It is regarded as important in this connection that immediately after blasting "the air and water should be kept on for a period, at least one hour, sufficient to insure that all development faces may be thoroughly blown out and wetted down by means of the water blast."

Since, as already suggested, tuberculosis in connection with miners' phthisis is a secondary complication and, in advanced stages of silicosis, is quite likely to appear, its control becomes a matter of prime importance. The committee found that the risk of conveyance of tuberculosis from infected persons to healthy persons underground is by no means negligible, and suggests as preventive measures (1) the nonemployment of tuberculous persons underground, (2) disinfection of underground workings, (3) disinfection and sanitation of compounds and living rooms, (4) the provision of change houses at shaft heads, (5) open-air treatment not only of tuberculosis but of other acute diseases in hospitals, (6) inspection of food supplies, (7) maintenance of a standard of health by periodic holidays.

It may reasonably be concluded from the committee's investigations that the adoption of proper and readily applied methods of dust laying, as recommended by this committee, and of precautions in avoiding the inhalation of air charged with dust after blasting, has led, and will continue to lead, to a decrease in the incidence of miners' phthisis. Other factors which should conduce materially toward the same end are the extension of the practice of working only one shift per day underground and the provision of an annual holiday to miners.

In this connection it is necessary to utter a grave note of warning. Sustained efforts on the part of mine officials and employees, both white and black, in preventing the formation of dust, are an imperative necessity. Generally speaking, the mines are to-day well equipped with water and the necessary appliances, but there are still too many cases of carelessness and lack of proper precautions in using these appliances. This is particularly the case with natives who, owing to the discomfort caused by the use of water and the slight additional effort required, are inclined to neglect precautions when not being watched.

The legal and moral responsibility is a joint one, and falls equally on employers and workmen. The management of the mine is responsible for the provision, maintenance, and continued supervision of an adequate water supply and of efficient appliances; on the workman falls the responsibility of putting these appliances in use in all cases where their employment is called for.

## ELEMENTARY FIRST AID FOR THE MINER.

According to information gathered by the United States Bureau of Mines, more than half of all miners who are hurt have been caught under falls of rock, coal, or ore, and more than one-fourth have been injured by cars or mine locomotives, while a great number are injured by mishandling powder and by electricity or machinery, by being overcome by bad air, or by being burned by gas that has been ignited. The same authority states that a study of 6,719 nonfatal injuries to miners shows that out of every 100 injuries about 30 are to the legs, about 8 to the back, about 11 to the feet, about 8 to the arms, about 14 to the hands, about 5 to the shoulders, about 4 to the hip bones, about 6 to the head, and about 4 to the face. It also appears that out of every 100 injured men who go to the hospital about 43 have broken bones, 15 have some part of the body crushed, 11 are badly bruised, and about 10 have open wounds, while the remainder have dislocations, strains, burns, and other injuries.

This situation has led the Bureau of Mines, in cooperation with mining companies and miners, to make every effort to have as many men as possible trained in first-aid work, so that they may know what to do at once when a fellow miner is hurt; that they may know how to treat the most frequent injuries—to legs, arms, feet, and back—and to treat those occurring less often—burns, electric shock, dangerous bleeding, etc. In pursuance of this plan a pamphlet was issued in July, 1916, entitled "Elementary first aid for the miner,"<sup>1</sup> which treats of only the simplest first-aid needs, aiming to show the miner who has not had first-aid training how to help an injured man, causing as little pain as possible, and at the same time preventing further injury by handling. In view of the fact that in most mine accidents a miner is injured at or near the working face, where no first-aid supplies are at hand, it becomes necessary for a fellow workman to know how to use brattice cloth, pieces of board, broken ties, bark from props or posts, rope, wire, coats, jumpers, etc., as aids in dressing the wounds of the injured man, and this information is set forth in the circular under review.

The following excerpts from the circular indicate briefly what should be done when a man is injured:

Be calm and remain so.

Send for the boss; send for the first-aid team and first-aid supplies; send for the stretcher; see that the doctor is called.

Find where the man is hurt before trying to move him.

Don't try to pull off clothing; cut or rip clothes if they must be taken off.

If his back is hurt, don't move him until you have help or the doctor comes.

<sup>1</sup> Elementary first aid for the miner, by W. A. Lynott and D. Harrington. United States Bureau of Mines, Circular 23. Washington, July, 1916. 24 pp. Illustrated.



Always place the injured man on his back with his head lower than the rest of his body (unless he is bleeding freely about the head); open his collar and loosen his belt.

Always look for bleeding, and if the blood is bright red and coming in spurts, try to stop it at once.

Don't give an injured man brandy or whisky or any stimulants while he is bleeding; keep him quiet and warm.

If any bones are broken, put on splints before moving him. If you are in doubt as to whether the bones are broken, always put on splints.

If you find that he has no broken bones and is not bleeding or spitting blood, but is very pale and is cold and breathes fast, keep him quiet; lay him on his back, lower his head, cover him with brattice cloth, clothing, blankets, or the like; place safety lamps, if they are used in the mine, under covers near him as an aid in keeping him warm; do not let others crowd around him, but give him plenty of air and get the doctor as soon as possible. Don't give him whisky or brandy; if he can swallow, give one teaspoonful of aromatic spirits of ammonia in one-half glass of water, hot coffee, or hot tea in sips.

If a man is burned, rip or cut off any clothing that might rub; if the clothing sticks to the burned skin, do not remove it, but remove the loose clothing by cutting around the piece that sticks; the doctor will remove it later.

If there is an open wound, do not touch it, and do not wash it or pour anything over or into it. If clean gauze can be found near by, cover the wound with it and tie it firmly, but not too tightly. If no clean gauze is at hand, place the injured part in such a position that it will not be soiled and hold it there until first-aid dressing can be obtained. Do not remove the injured man until the proper dressings have been applied, unless the man is on a live electric wire or under a fall of rock.

Do not touch the first-aid packet until just before using it, and do not put your hands or anything else on that part of the clean cloth that is to cover the wound.

These instructions are followed by specific directions governing procedure in cases of bleeding, in dressing for broken bones, in care of sprains and bones thrown out of joint, in cases of electric shock or of men overcome by bad air, and in cases of burns, injuries to the eye, and shock.

#### WORKMEN'S ORGANIZATIONS IN LOCAL ANTITUBERCULOSIS CAMPAIGNS.

A pamphlet issued in May, 1916, by the National Association for the Study and Prevention of Tuberculosis,<sup>1</sup> gives an account of some of the many ways in which workingmen have helped in the prevention of this disease. Its endeavor seems to be to show some of the principal local experiments in the care and education of the tuberculous that have resulted in various forms of cooperation between employer and employees on the one hand and the antituber-

<sup>1</sup> Working men's organizations in local antituberculosis campaigns, by the National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second Street, New York, May, 1916. 64 pp.

culosis agencies of the community on the other. Such experiments as those in Hartford, New Haven, and Meriden, Conn., Worcester, Mass., Buffalo, Albany, and Brooklyn, N. Y., and Newark, N. J., are described, but more particular attention is given to restricted local movements, some of them under the direction of labor unions. The work of benefit associations in supplying industrial insurance and in cooperating in local antituberculosis campaigns has not been overlooked, but emphasis is laid upon the specialized agencies which have been brought into being by or for workingmen with tuberculosis as their direct object of attack. The hope is expressed that this recital of certain typical forms of work may contain suggestions of value to communities anywhere in the United States.

The formation of local organizations of workingmen for the purpose named has been bottomed upon an appreciation of the important relation which health bears to industrial efficiency and particularly upon a recognition of the fact that of all forms of illness which prevent workers from giving full time and energy to the work at hand, tuberculosis, its treatment and prevention, presents one of the most important problems that industry has to face. It does not appear as an occupational disease but as a disease of practically all occupations. Thus "the number of factories and stores that are requiring a thorough physical examination of all employees at periodic intervals is increasing with great rapidity," the object of such examination being the "early detection of illness while the employee is still at work; detection at a time when full restoration of health is feasible; protection of employees from undetected foci of infection in their midst."

The report notes the development, methods of organization, and work of the workingmen's free tuberculosis bed funds in Hartford, South Manchester, New Haven, and Meriden, Conn. There are in the State four State tuberculosis hospitals to which most of the patients entitled to the benefits of the various funds are sent.

While State law estimates the weekly per capita to be at least \$10, and it is expected that those able to pay full rates will do so, the minimum charge of \$4 is the amount generally paid by every one, the State making up the deficit. Consequently, when any of the workingmen's free bed funds pay \$4 for the care of fellow workers, the employer, the employees, and the State are all contributing toward his maintenance.

In Hartford and South Manchester, where the first free bed funds, contributed by employers and employees, were administered, the unit plan was adopted whereby each concern with 500 or more employees is a unit in itself, having its own organization and handling its own funds separately. Relief is extended to dependents as a matter of prevention. In one plant, which is given as typical,

during the seven years from 1908 to 1914, the free bed fund association collected \$10,948.87 and expended \$8,984.74 for the care of 98 patients, or an average of \$91.68 each.

The association furnishes assistance to the needy family, "father, mother, husband, wife, brother, sister, or child," of an employee who is in a sanatorium, in addition to the \$6 a week provided for the patient's care, the exact amount depending upon circumstances and the discretion of the officers. No limit is placed upon the length of time during which a patient may receive aid from the association.

Under the New Haven plan the money collected is pooled together into one fund controlled by the Employees' Tuberculosis Relief Association. The employees of any concern who make contribution to the fund become members of the association, and the employers are under no agreement to contribute an amount equal to the contribution of their employees, although it is stated that many of them do contribute. Part of the funds are raised by entertainments, etc. Under this plan, also, dependents are cared for.

It is preferred that a patient go to a sanatorium for treatment, but if he is under medical supervision at home the association will pay the bills for doctor, food, and supplies up to the limit of \$4 per week upon the recommendation of the New Haven Visiting Nursing Association, which actively cooperates with the fund. Examinations are also made without cost to the patient. \* \* \* No money is given directly to the patient and no relief is given directly to his family while he is in a sanatorium, but where necessary this is secured by the central committee from other charitable organizations. Upon the return of a patient from the sanatorium an effort is made to find suitable employment for him, preferably light outdoor work, if he can not resume his former employment.

From June 28, 1912, to December 31, 1914, \$20,552.79 was contributed, and 186 cases and 53 dependents were given care at an expense of \$16,608.15, or an average of \$69.49 each.

In Meriden the movement originated with the central labor union and developed into a city-wide association, with everyone eligible for admission and for relief. Employers, employees, and the general public were asked to contribute to the funds, the object of which was to help any worthy resident by paying \$4 a week for his maintenance in a hospital or sanatorium. During the years 1912-1914 the local association paid the expenses of 77 patients in the sanatorium at a cost of \$5,859.75, or an average of \$76.10 each.

In summarizing the three plans, two commendable points of similarity are noted: (1) The lack of red tape and the ease with which the officers can adjust their relief to almost any case of need, and (2) the manner in which all of them cooperate with other existing social and public health agencies and with the other antituberculosis agencies of the State. However, two points of weakness are pointed out: (1) The lack of machinery to discover early cases of tuberculosis and (2) the lack of continuity of effort.



The experience in almost all Connecticut cities where the free bed fund plan has been tried out is that wherever a group of workers and employers has maintained its interest and stimulated that of others the movement has proven successful. Where the initial enthusiasm has waned, funds have lain idle which might have been well used, and little or no work has been done.

In direct contrast to the plans above outlined, in which the funds are raised through the cooperation of employers, employees, and the general public, the report gives an account of the plan tried in Worcester, Mass., where the entire fund for the relief of tuberculous workers was contributed by the employers. This movement, however, seems to have lost force for the reason that employers who agreed to help their employees failed to require medical examination in order to detect new cases, and also because of lack of cooperation of labor itself.

In certain cities, notably Albany and Brooklyn, relief plans have developed within the ranks of the labor unions "primarily and originally conceived for the purpose of establishing independent sanatoria for tuberculous members." But they apparently achieved only partial success, for "the experience of the Albany and Brooklyn labor unions would seem to indicate that the constant burden of the cost of upkeep of an institution is too great a drain upon the slender resources of these groups alone."

Differing materially from the plans heretofore mentioned is a method of cooperation in the antituberculosis campaign developed in Buffalo, where the trades-union section of the Buffalo Association for the Relief and Control of Tuberculosis has been organized, and in Newark, N. J., where a Trades-Union Antituberculosis Association has been formed. It is stated that these associations were organized primarily for education and secondarily for the relief of afflicted members. The associations also have confined their efforts almost exclusively to the labor unions affiliated with them. In these two organizations, however, the report notes the same weaknesses that have been mentioned in connection with the free bed funds and in addition calls attention to another weakness—failure to enlist the support of employers.

The problem of better health for the workingman will be solved only when both these groups get together on a mutual program for the prevention of disease.

The plans described are presented as the best that have been undertaken in the United States, but the ideal form of cooperation, suggests the report, would be an adaptation to American experience of the British or German health and sickness insurance plans, under which the State, the employer, and the employee each assumes his proper share of responsibility in the prevention and control of infec-

tious diseases. The adoption of such a plan, however, is admittedly somewhat remote; hence the report suggests a method of cooperation which, in the light of the experience described, shall include provision for (1) some form of organization, (2) the collection of funds, (3) the discovery of early cases, (4) the administration of relief for needy cases, (5) educational work, (6) the collection and compilation of statistical material with reference to the prevalence of tuberculosis among workingmen, and (7) united community or group action on legislative and other matters.

There seems to be a large opportunity for the organization of anti-tuberculosis societies in the nearly 250 cities in the United States with a population of 25,000 and over, and in the many small communities where groups of workingmen ranging from 500 to several thousand are congregated over a relatively small area.

No matter whether a community is strongly unionized or not, with a tactful approach and a proper plan, the men and women in the mills and factories can be turned into a mighty source of influence in their community, both for the good of the general public and for the benefit of the individual personal hygiene of the workers themselves.

Summarizing the facts in the experience of the various organizations mentioned in the report, the following plan of cooperation is suggested which it is believed could be adapted to almost any industrial community in the United States and which would not, if properly worked out, decrease the support of the central antituberculosis society either financially or morally, but would tend to increase its influence.

1. An organization closely allied with that of the central antituberculosis society and directed by the latter organization.

2. A plan of collection of funds which would bring contributions both from employees and employers, either by means of periodic contributions of fixed amounts or of collections at stated intervals or when needed.

3. A system of periodic medical examination so arranged that it would discover and control early cases of tuberculosis and other diseases, and that it would also provide for the suitable employment of the convalescent worker.

4. A division of responsibility which would throw much of the care or relief of the tuberculosis workingmen upon the shoulders of the special organizations of the men themselves. The actual relief might be administered through recognized relief channels such as the charity organization society, visiting nurse association, etc., but the burden of responsibility for this work should be upon the shoulders of the men themselves.

5. The educational function of the organization of workingmen should be pressed home at every possible opportunity.

6. The opportunity to collect statistical material should be recognized and the workingmen themselves should be impressed through every possible means with the necessity and desirability of this type of cooperation.

7. Utilization of the workingmen's organization for organized community effort such as legislation, etc., should not be overlooked.

# RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION AND ACCIDENT INSURANCE.

## ILLINOIS.

Experience under the workmen's compensation act of Illinois has prompted the industrial board in its third annual report for the year ending June 30, 1916,<sup>1</sup> to commend the elective instead of the compulsory theory of compensation law and to suggest the advisability of making the law applicable to all employers of labor. The Illinois law, it is stated, "carries with it no definite plan, directions, or authority for the establishment of any scheme of investigation or methods of conducting hearings that will escape the dangers embodied within constitutional inhibitions against property rights," and the board believes that the law should be amended so as to provide a "basis of adjustments that will obviate the evils of our present method of procedure," to which end it proposes a system of insurance rating under which "all claims, or well nigh all, could be settled without the taking of testimony in long-drawn-out trials, and a compensation law actually become what it was intended to be—a simple, summary, and speedy remedy." To effectuate this result the following recommendations are submitted:

That the act be so amended as to create a State insurance fund, controlled and managed through the industrial board.

Power to make manual classifications of risks, based upon pay rolls, properly authenticated, etc.

Provision for a medical department, with means of employing the best possible talent, requiring such persons so connected therewith to devote all of their time to the questions of investigation and report.

Empowering the industrial board, through the medical department, to make classifications of injuries and disability and making the findings of the medical department conclusive upon all compensation matters coming within the purview of such medical department.

To so amend the law with reference to the reporting of accidents and the keeping of statistics, as well compelling the reporting of all accidents and ample provision for an extensive and thoroughly competent and well-equipped statistical department.

In addition to these recommendations the board suggests that the language of the law regarding lump-sum payments should be changed, so as to define specifically and accurately every power of the board and fix absolutely without confusion or guess the relative rights of the parties, thus obviating many of the difficult questions which present themselves in the administration of this portion of the act.

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<sup>1</sup> Illinois. Third Annual Report of the Industrial Board, June 30, 1916. 303 City Hall Square Building, Chicago. Springfield, 1916. 69 pp.



The report of the arbitration department shows that on June 30, 1915, there were pending 486 applications for arbitration and that 1,795 additional cases were filed during the year, making a total of 2,281 cases, of which 1,865 were disposed of, leaving 416 pending at the close of the year. Of the 1,194 petitions for lump-sum settlements all but 79 were disposed of. Since the act became effective on July 1, 1913, 115 cases have been taken into the circuit court upon writ of certiorari, and of this number 10 have been decided in the appellate court and 5 in the supreme court.

The security supervisor reports that of 32,743 employers to whom demands were sent, 30,502 purchased compensation insurance, 198 furnished proof of their financial ability to carry their own risk, and 2,043 failed to comply with the demand. In this connection the opinion is expressed that the security section of the Illinois law should be amended, since "the entire question of making secure the payment of compensation to employees is of the utmost importance to the proper administration of the act, for it will be readily seen that awards and judgments entered by this board or the courts against employers are farcical if the employers have not in some manner properly safeguarded the payment thereof." To assure the payment of awards, it is suggested that the law should be amended so as to provide for the levying of a fine of 10 cents a day for each employee, but not less than \$1 per day and not more than \$50 per day, upon employers who do not provide for securing payment of compensation in some manner acceptable to the industrial board. It is further suggested that the wide variance in workmen's compensation rates should be remedied, since "it is unfair for employers in the same class of business to be charged different rates." A standard form of policy is also recommended.

Attention is called to the fact, both in the general report of the board and the report of the statistician, that only 5,670 employers filed accident reports, which, in view of the fact that the report of the security supervisor indicates 30,700 employers who filed certificates of insurance guaranteeing compensation, etc., leaves approximately 25,000 employers who "are either disobeying the law deliberately or are not fully informed as to the requirements of the workmen's compensation act." This condition prompts the board to conclude that "no statistical tables or deductions based on such unreliable data and reporting can possibly be of any considerable value."

During the calendar year ending December 31, 1915, 18,724 accidents (371 fatal and 18,353 nonfatal) were reported; 1,855 cases (246 fatal and 1,609 nonfatal) were pending at the end of the year, leaving a balance of 16,869 cases (125 fatal and 16,744 nonfatal) closed during the year and analyzed in the report of the statistician.

These cases represent a total expenditure for compensation of \$1,075,287,<sup>1</sup> of which \$248,821 was for fatal cases and \$826,466 for nonfatal cases; and an expenditure for medical attention of \$217,448,<sup>1</sup> of which \$4,143<sup>2</sup> was for fatal cases and \$213,305 for nonfatal cases. These figures indicate a cost per accident of \$2,023.71<sup>3</sup> in fatal cases and \$62.09 in nonfatal cases. The largest proportion of these accidents (20.79 per cent) occurred in steel and metal manufacturing, the total cost for compensation, medical attention, etc., being \$263,109, and the next largest number of accidents (12.81 per cent) occurred in building construction, at a total cost of \$210,419. Nearly 11 per cent occurred in mining and quarrying,<sup>4</sup> the total cost being \$113,746. The following table shows the duration of disability and the total cost of 16,744 nonfatal accidents by industry groups:

NUMBER AND PER CENT, DURATION IN DAYS, AND TOTAL COST OF 16,744 NONFATAL ACCIDENTS, BY INDUSTRY GROUP.

Industry group.	Number of accidents.	Per cent.	Duration of disability.		Cost of accidents.			
			Days.	Per cent.	Compensation.	Medical.	Total.	Per cent.
Manufacturing.....	8,468	50.6	180,442	47.6	\$429,550	\$93,507	\$523,057	50.3
Public service.....	2,921	17.4	67,885	17.9	131,665	39,934	171,599	16.5
Construction.....	2,504	15.0	68,436	18.1	154,721	38,292	193,013	18.6
Mining and quarrying.....	1,783	10.7	40,571	10.7	69,295	27,802	97,097	9.3
Trade (stores, etc.).....	753	4.5	15,580	4.1	27,522	9,464	36,986	3.6
Agriculture.....	114	.7	2,246	.6	7,496	2,035	9,531	.9
Miscellaneous.....	201	1.2	3,838	1.0	6,217	2,271	8,488	.8
Total.....	16,744	100.0	378,998	100.0	826,466	213,305	1,039,771	100.0

Of these 16,744 nonfatal accidents the disability in 29.7 per cent terminated within the first week—that is, within the second week of disability, since the act provides that compensation becomes payable commencing with the eighth day of temporary total disability. Slightly more than 22 per cent terminated within the second week—that is, the third week of disability.

As to the causes of nonfatal accidents, the report indicates that in all but two industry groups, manufacturing and mining and quarrying, the greatest number of accidents was caused by falls. Taking all industry groups into consideration, 51.8 per cent of the nonfatal accidents were caused by falling objects, falls, and lifting or han-

<sup>1</sup> In computing this total each amount of 50 cents and over was counted as \$1, and each amount of less than 50 cents was omitted.

<sup>2</sup> Includes \$2,700 paid for funeral expenses.

<sup>3</sup> In 18 of the 125 fatal cases there were no dependents and only funeral expenses were paid. The average cost of each of the 107 fatal cases in which there were dependents was \$2,339.

<sup>4</sup> This small percentage for such a hazardous industry, it is explained, is due to the fact that a great many mine operators, having rejected the provisions of the workmen's compensation act, are not within the jurisdiction of the industrial board and are therefore exempted from filing accident reports with the board.

dling material, "causes which in themselves should not be hazardous. To a great extent it is the personal element or the individuals that make them so." A total of 212,880 days were lost as a result of industrial accidents due to these causes which the report regards as preventable.

Of 16,289 males and 455 females injured, 1,252 (7.7 per cent) of the former and 368 (80.9 per cent) of the latter were receiving less than \$10 per week. Male employees 24 years and under 30 years of age sustained 20.92 per cent of all nonfatal accidents to males; female employees 18 years and under 24 years of age sustained 54.45 per cent of the total nonfatal accidents to females. Only 4.78 per cent of those injured were non-English speaking workers. Among male workers the occupational group showing the highest number of accidents was laborers (4,727 or 29.02 per cent); while of the female workers the largest number of accidents occurred among those classed as machine operators (160 or 35.16 per cent).

Taking up the nonfatal accidents by nature of injury it appears that more than half, 53.17 per cent, caused lacerations and contusions involving a total compensation and medical expenditure of \$320,066, or 30.78 per cent of the total cost of all nonfatal accidents. It also appears that while 4.11 per cent of the total number of nonfatal accidents resulted in amputations, loss or total loss of use of a member of the body, the cost of such injuries amounted to 23.53 per cent of the total cost of all nonfatal accidents. This, it is explained, is accounted for by the fact that the law provides specific indemnity for injuries of this nature; fixed amounts are not provided for in cases where the incapacity is of a temporary nature. Of the total number of nonfatal accidents, 7.11 per cent resulted in infections, but it is believed that this should be very much higher as a great number of the lacerations and contusions undoubtedly caused infection but were not so reported. Of the total number of accidents reported, fatal and nonfatal, nearly 75 per cent involved the upper and lower extremities, most of these accidents being to the latter.

During the period from January 1, 1916, to May 31, 1916, there were reported to the board 7,896 accidents, 98 being fatal and 7,798 nonfatal. The amount reported paid for compensation and medical service was approximately \$500,000. An analysis of these accidents will appear in a future report of the board.

#### IOWA.

The second biennial report of the Iowa Industrial Commissioner covers the operation of the workmen's compensation law for the first biennial period ending June 30, 1916.<sup>1</sup> In this report the com-

<sup>1</sup> Iowa. Report of the workmen's compensation service for the biennial period ending June 30, 1916. Des Moines, 1916. 54 pp. 1 insert chart.



missioner devotes considerable space to a statement of the principles and the growth of workmen's compensation in general, compares some of the provisions of the Iowa law with those of adjoining States, pointing out the weaknesses of the former as well as emphasizing the features regarded as commendable, and suggests or recommends such changes in the law as seem to him desirable.

Under the Iowa statute compensation is elective, but if the employer elects he must insure. This elective compensation plan seems to have developed what the commissioner terms a "potential danger in Iowa," growing out of the large number of rejections which have amounted to from 600 to 1,000 per cent greater than in the neighboring States.

The Wisconsin compensation law carries benefits 30 per cent heavier, the same can be said of Illinois, while the scales of Minnesota and Nebraska are fully as burdensome as ours. Yet, as stated, the formal rejections in Iowa are astonishingly greater; and, if we add the informal ones affected by a neglect to carry insurance, Iowa has many times more workmen forced outside the compensation law than all the neighboring States combined, with their large excess of industrial population.

It is estimated that the rejections in Iowa, including the railroads, affected more than 50,000 workmen as compared with only 3,000 in Wisconsin with double the industrial population. In this connection it is noted that these rejecting employers (involving more than 30,000 employees if the railroads are excluded) "are not only escaping the spurs intended to urge them toward safety precautions, but are, as a class, halving their cases, substituting 50 per cent for 100 per cent settlements, depriving their workmen of the security of insurance, and avoiding insurance cost themselves, and thus acquiring an undue and illegitimate advantage over competitors who are faithfully upholding the compensation law and paying the full benefits."

Special mention is made of the fact that insurance rates under the compensation law have been greatly reduced from those existing under the liability act. For instance, on coal mines there has been a reduction of from \$6.50 to \$1.75 per \$100 of pay roll. The average basic rate of workmen's compensation in 1914-15, as compared with Wisconsin taken as 100 per cent, was 70 per cent, and it is believed that this rate may be even further reduced.

Although the act was especially intended, according to the report, to apply to the 40,000 or more railroad employees in the State, the provision to that effect being "the strongest to be found in any of the 33 acts enacted in this country," it is admitted that in this respect the law has "utterly failed." All but four railroads at the outset formally rejected the act, and these four, being granted a

release from the insurance provision of the law, "with one exception have made what is from the State standpoint nothing more than a mere show of observing the compensation provisions; with favorable instances almost too few to be mentioned, they claim nearly all accidents to arise in interstate work and assert exemption from the State law, insisting on settling with over 95 per cent of their injured employees under the provisions of the Federal employer's liability act, redressing cases of negligence only. They have so far assumed the right to pass on all cases of injury and determine according to their own judgment that the negligence cases are taken from the State by congressional action, and the nonnegligence cases fail of relief through congressional inaction. An injury utterly free of remote interstate bearings is a rarity on these lines, and only such do they recognize as coming under the Iowa law." Six hundred and forty-two dollars and fifty-six cents was expended, which prompts the commissioner to remark that "it is safe to say that in no State, large or small, has such a volume of compensation business been administered for amounts no larger than the totals disclosed" in the itemized list of expenditures as published in the report.

During the biennial period ending June 30, 1916, according to the report under review, "the indemnity furnished the victims of industrial accidents has been increased at least 500 per cent over what was paid them under the old law." It is stated that under the employers' liability law it took \$3 in insurance and legal expenses to carry \$1 of relief to the victim of an industrial accident, while under the workmen's compensation law this cost has been reduced to 65 cents, "and is capable of much more reduction if the opportunities of mutual insurance are used. Settlements under the law have been made during the biennial period in 6,531 cases with compensation paid to the amount of \$318,278.03, with medical relief supplied to the extent of \$94,041.74." Of 73 arbitration cases, 7 were appealed to the district court and 3 to the supreme court.

In presenting statistical data on accidents the commissioner seems to have been handicapped somewhat by the fact, as expressed in the report, that "by an oversight in the law the industrial accident reports in this State are left in such a confused and unsatisfactory condition that they hardly seem to justify the effort to make any extended analysis of them." Thus of 31,741 accidents reported it is noted that a large proportion was of a trivial character, since employees are required to report all accidents, and that only 6,869 were compensable of which 6,531 were closed by settlement. The following table summarizes the accident experience of the State during the biennium ending June 30, 1916.

STATEMENT OF CLOSED COMPENSABLE CASES IN IOWA DURING THE BIENNIUM  
ENDING JUNE 30, 1916, SHOWING NUMBER OF ACCIDENTS AND AMOUNTS PAID FOR  
COMPENSATION AND MEDICAL SERVICE UNDER EACH SPECIFIED DESIGNATION.

Nature of case.	Number of cases.	Compensa- tion paid.	Medical expenses.	Total.	Average per case.
Permanent partial disability other than dis- memberment.....	48	\$15,666.34	\$1,603.64	\$17,269.98	\$359.79
Temporary partial disability.....	4	81.32	39.00	120.32	30.08
Total permanent disability.....	4	2,623.82	311.75	2,935.57	733.89
Irregular.....	194	11,403.30	8,232.60	19,635.90	101.22
Dismemberment.....	266	55,092.93	7,472.70	62,565.63	235.21
Medical only.....	1,105		5,852.33	5,852.33	52.96
Temporary total disability.....	4,849	167,257.67	64,642.56	231,900.23	47.82
Deaths.....	61	66,152.65	15,887.16	72,039.81	1,180.98
Total.....	6,531	318,278.03	94,041.74	412,319.77	631.32

<sup>1</sup> Burial expenses.

It appears from the report that in the year 1914, 26 companies, and in the year 1915, 28 companies, carried compensation insurance in Iowa. The workmen's compensation business transacted by these companies, as reported to the commissioner, is set forth in the following table, compiled from the report:

WORKMEN'S COMPENSATION BUSINESS TRANSACTED IN IOWA BY 26 INSURANCE  
COMPANIES IN 1914 AND BY 28 INSURANCE COMPANIES IN 1915.

Item.	1914, 26 companies.	1915, 28 companies.
Gross premiums.....	\$683,666.86	\$668,333.21
Earned premiums.....	\$353,595.75	\$381,790.36
Losses and claims.....	\$71,325.28	\$115,300.84
Loss expense <sup>1</sup> .....	<sup>2</sup> \$14,593.00	\$20,945.44
Losses outstanding.....	\$135,477.91	\$130,230.67
Total losses incurred <sup>3</sup> .....	\$221,396.25	\$266,476.95
Loss ratio.....	62.00	69.79
Additional reserves for expenses of settlement as computed by companies.....	\$2,810.32	\$2,387.07
Acquisition expense (per cent).....	17.00	<sup>4</sup> 21.72

<sup>1</sup> Includes all payments for legal expense, and only such other payments as apply exclusively to the investigation, adjustment, and settlement of losses and claims under or on account of compensation policies issued in the respective years.

<sup>2</sup> Taken from the report. Based on other totals in the table this should be \$14,593.06.

<sup>3</sup> Includes expenses of adjustment.

<sup>4</sup> Not shown in the report, but computed from figures there given. It is acquisition expense divided by earned premiums.

Tables are given in the report showing compensation awards by weeks of payment for specified injuries in various States, total compensation for each kind of accident on the basis of a wage of \$14 per week in various States, and computed percentages for specified injuries compared to total disability based on schedules of compensation awards under the laws of the various States.

In the opening pages of the report the commissioner takes occasion to explain somewhat in detail certain recommendations which are presented in the following summary:

Provision for a deputy commissioner.

An amendment to remove the embarrassment and injustice promoted by non-insuring employers.

Increase the minimum and maximum weekly payments from \$5 and \$10 to \$6 and \$12, respectively.



Extend the period of medical relief to four weeks, instead of two.

Provide for payment from date of injury in cases of prolonged disability.

Making more clear and definite the manner of appeal to the district court.

Provide additional safeguards in the matter of lump-sum settlements.

Providing that earnings shall not be conclusive as to measure of liability in cases of permanent disability.

Including loss of hearing as a part of the specific partial permanent disability schedule.

Exempting arbitration proceedings from the technical rules of the common law as to evidence.

An amendment providing that the loss of two arms, hands, feet, legs, or eyes must be caused by single injury in order to call for the aggregate payment.

An amendment providing for an injured minor making settlement and executing a binding release.

An amendment to provide for trustees for minor employees as well as for those dependent or mentally incapacitated.

An amendment to exempt employers from reporting accidents which do not disable for a longer period than the day of injury.

An amendment to specify the liability of the rejecting employer at common law as modified by the compensation act, and require all employers who fail to insure to post notice of such failure.

#### PENNSYLVANIA.

The September (1916) bulletin of the Pennsylvania Department of Labor and Industry<sup>1</sup> contains (pp. 33 to 46) a brief summary of accidents occurring in the eight preceding months and in the month of August, together with a table presenting fatal accidents by cause, nature of injury, social condition, counties, etc., for each specified industry for the months of April, May, and June. From this summary it appears that 246 workers were killed during August, in which month it is stated that there were more accidents causing injuries disabling workmen for more than two days than in any other month up to that time. The number killed and injured during the month was 23,817, a daily average of 882; during the first eight months of the year 1,582 workers were killed and 164,502 injured. The following table shows the distribution of these accidents:

FATAL AND NONFATAL ACCIDENTS, SHOWING PER CENT OF EACH DURING THE FIRST EIGHT MONTHS OF 1916, INDICATING ALSO THE DAILY AVERAGE PER MONTH.

Month.	Fatal.	Per cent.	Nonfatal.	Per cent.	Total.	Daily average. <sup>2</sup>
January.....	129	8.2	13,336	8.1	13,465	518
February.....	222	14.0	24,253	14.7	24,475	979
March.....	239	15.1	26,732	16.3	26,971	999
April.....	169	10.7	17,841	10.9	18,010	720
May.....	195	12.3	18,184	11.0	18,379	735
June.....	182	11.5	19,757	12.0	19,939	767
July.....	200	12.6	20,828	12.7	21,028	841
August.....	246	15.5	23,571	14.3	23,817	882
Total.....	1,582	100.0	164,502	100.0	166,084	810

<sup>1</sup> Pennsylvania. Department of Labor and Industry. Monthly Bulletin, September, 1916. Harrisburg, 1916. 104 pp.

<sup>2</sup> These figures are evidently obtained by dividing the total accidents not by the number of working-days but by the number of days worked, which figure is not given in the report.

It is stated that during the eight months 49,552 compensation cases have been entered, 1,578 of which were fatal and 47,974 nonfatal; and that compensation agreements have been perfected for 592 of the fatal cases providing support for 418 widows, 130 parents, 1,055 children, 14 sisters, 5 brothers, and 1 niece. It is further noted that on August 1 the amount of compensation paid for disability cases was in excess of \$450,000, while the amount of compensation to be paid in fatal cases where agreements have been definitely made aggregates more than \$1,300,000. The amount of compensation paid in fatal cases to August 1 exceeded \$39,000.

The detailed table, containing figures for the three months, April, May, and June, to which reference has been made shows that of 489<sup>1</sup> fatal cases, 131 (26.8 per cent) were due to falling objects, 130 (26.6 per cent) to power vehicles, and 63 (12.9 per cent) to falls of persons; that 188 (38.4 per cent) resulted in crushes and bruises and 135 (27.6 per cent) in fractures, sprains, and dislocations; that 218 (44.6 per cent) were classified as industrial accidents, while 193 (39.5 per cent) occurred in connection with the operation of mines, and 78 (16 per cent) in public service.

#### RHODE ISLAND.

The Rhode Island workmen's compensation act became effective on October 1, 1912. At the end of the third year, September 30, 1915, there were, according to the Twenty-ninth Annual Report of the Commissioner of Industrial Statistics,<sup>2</sup> 2,330 establishments<sup>3</sup> under the act, an increase of 113, or 5.1 per cent, over 1914. The report notes 11,511<sup>4</sup> accidents in 1915, an increase of 462, or 4.2 per cent, over the previous year; there were 31 deaths in 1915 and 52 in 1914. Of the total accidents reported, 8,278, or 71.9 per cent, were in establishments carrying compensation insurance, while 3,233, or 28.1 per cent, were in establishments not carrying such insurance. The cost to employers carrying compensation insurance under the act was \$390,750.38 in premiums (\$431,257.26 in 1914), which, "based on the 122,534 wage earners employed in 1915, \* \* \* was \$3.14<sup>5</sup> per

<sup>1</sup> This does not agree with the number of fatalities occurring in these months as shown in the table on page 119; the discrepancy is not explained.

<sup>2</sup> Rhode Island. Twenty-ninth Annual Report of the Commissioner of Industrial Statistics, Providence, 1916. 108 pp. Workmen's compensation act, pp. 23-30.

<sup>3</sup> This includes 62 establishments from which no data were received as to whether or not they were under the act in compliance with the law.

<sup>4</sup> The report gives 11,611 in one place and 11,601 in another place, but mentions the fact that the number in 1915 was an increase of 462 over 1914 when the number of accidents is stated to have been 11,049. Hence, 11,511 is taken as the number of accidents in 1915. Moreover, it is the sum of the items mentioned in the following sentence, which are taken from the report.

<sup>5</sup> This is taken from the report; it should be \$3.19.

wage earner." Establishments under the act not carrying compensation insurance paid for medical attention, compensation for injuries, including amounts paid for accident or deaths occurring in preceding years, \$42,817.39,<sup>1</sup> an average of \$1.33 for each person employed. Insurance companies paid out for the same purposes \$169,094.91,<sup>1</sup> an average of \$1.34<sup>2</sup> per person.

If the cost to insurance companies carrying on business in Rhode Island in 1915 was \$1.34<sup>2</sup> per wage earner on account of medical attention and compensation for injuries, and the per capita premiums, \$3.14,<sup>3</sup> the difference of \$1.80 per wage earner represents an amount to be charged up for the actual carrying on of compensation business and the necessary surplus to be laid aside for unusual payments which may arise on account of catastrophes and for profits.

It is stated in the report that the cost per wage earner to employers carrying compensation insurance under the act, based on the average number of wage earners employed and the amount of premiums paid to insurance companies, was 59 cents less in 1915 than in 1914; while the cost per wage earner to insurance companies for medical attention was 45 cents in 1915 against 64 cents in 1914.

It appears that eight of the accidents which resulted in death were in establishments carrying no compensation insurance; that the per cent of accidents to the total number of wage earners in insured establishments was 6.7 in 1915, while the per cent in uninsured establishments was 10.1; and that the per cent of deaths to the total number of wage earners in insured establishments was 0.01 in 1915, while the per cent of deaths in uninsured establishments was 0.02.

The total amount paid out in 1915 by insurance companies and establishments under the act which do not insure, but which filed proof of solvency or a bond in accordance with the law for medical attention, accidents, and deaths was \$211,912.30<sup>4</sup> in 1915 against \$248,284.64 in 1914, a decrease of \$36,372.34, or 14.6 per cent; while the average number of wage earners in the establishments under consideration increased 1.3 per cent.

<sup>1</sup> This is taken from the report. It does not agree with the amount in the table, and the discrepancy is not explained.

<sup>2</sup> If this is based on the 122,534 wage earners given above, the average should be \$1.38.

<sup>3</sup> See note 5, p. 120.

<sup>4</sup> This is taken from the text of the report and does not agree with the amount in the table. See notes to table.



The following table shows for 1914 and 1915 the aggregate disbursements to wage earners under the Rhode Island workmen's compensation act:

AMOUNTS PAID OUT BY INSURANCE COMPANIES AND BY ESTABLISHMENTS CARRYING NO COMPENSATION INSURANCE, FOR EACH SPECIFIED ITEM, DURING THE YEARS 1914 AND 1915.

Expenditure for—	Insurance companies.		Establishments carrying no compensation insurance.		Total.	
	1914	1915	1914	1915	1914	1915
Compensation.....	\$76,099.07	\$55,969.74	\$26,900.86	\$13,929.60	\$102,999.93	\$69,890.34
Compensation for accidents occurring during preceding year.....	43,457.90	40,012.66	.....	9,003.80	43,457.90	49,016.46
Deaths.....	7,526.76	2,228.21	5,500.32	4,556.17	13,027.08	6,784.38
Compensation for deaths occurring during preceding year.....	13,781.27	13,213.00	.....	495.00	13,781.27	<sup>1</sup> 18,168.00
Medical fees.....	56,329.44	55,343.34	18,689.02	17,160.78	75,018.46	72,504.12
Total.....	197,194.44	166,766.95	51,000.20	45,145.35	248,284.64	<sup>2</sup> 216,372.30

<sup>1</sup> The sum of the items is \$13,708, which appears to be correct, since by substituting it for the amount here given the total of \$211,912.30 is obtained, which agrees with the text.

<sup>2</sup> This does not agree with the amount given in the text on page 121; the discrepancy is not explained.

The report recommends that the present act be amended so as to require every insurance company carrying on compensation insurance business in the State to report immediately to the commissioner the name of every establishment so insured, the amount of the pay roll so insured, the rate at which the insurance is placed, and the date of cancellation or termination of any compensation policy. It is thought that such an amendment would give the commissioner accurate information as to whether or not establishments are legally under the act, and whether or not the rate is one which an insurance company can afford to make, considering the cost of carrying on compensation insurance business, the cost of medical attention and actual compensation, and the per cent of premiums which should be laid aside for surplus purposes. "There can be no guaranty to the employees of Rhode Island that complete protection is assured them under the act until such an amendment to the compensation law has been made."

#### MASSACHUSETTS HOMESTEAD COMMISSION.

By an overwhelming vote in the State election of 1915 an amendment to the constitution of Massachusetts was adopted authorizing the Commonwealth to take land and to hold, improve, subdivide, build upon, and sell the same for the purpose of relieving congestion of population and providing homes for citizens. The homestead commission created in 1911 and instructed to report a bill or bills embodying plans and methods of carrying them out whereby, with the assistance of the State, homesteads or small houses and plots of ground

might be acquired by mechanics, factory employees, laborers, and others in the suburbs of cities and towns, made an exhaustive study of housing conditions disclosing the need for some measure of public relief to those in congested districts. This commission, following the adoption of the amendment, submitted its third annual report,<sup>1</sup> embodying the result of its investigation and the text of a bill intended to provide for "a moderate, conservative, carefully conducted experiment or demonstration, in order that experience may show what the Commonwealth may do along these lines with safety to itself and benefit to the public." This bill authorizes the homestead commission, by and with the consent of the governor and council, to acquire and develop a tract or tracts of land for the purpose of providing homesteads for citizens, and to sell such land, or portions thereof, with or without buildings thereon, on terms and conditions to be approved by the governor and council, subject to the provision that no land shall be sold for less than its cost, all receipts to be paid into the State treasury. The bill authorizes an expenditure for this purpose of not to exceed \$50,000.

If land is to be provided for this purpose, the commission recognizes the fact that it becomes necessary to guard against the waste that would probably result by putting those inexperienced in the care and management of the soil in possession of "small houses and plots of ground," and to this end it has recommended also the passage of a bill permitting cities and towns to teach agriculture to families and individuals.

The report under review is largely devoted to a presentation of what the commission considers feasible and practicable means for relieving the bad housing conditions which were disclosed by its investigation, and therefore takes up in detail a discussion, supported by statistics and illustrations, of (1) the need of a larger supply of wholesome homes; (2) whether that need may be met by private enterprise and initiative; (3) the opportunities for a larger supply of wholesome homes; (4) the demand for, location, cost, and kind of homes needed; and (5) results which may be expected, communal and individual.

In pointing out the need of more wholesome homes in Massachusetts the commission cites statistics to show that the tenement-house population in the State and in various cities of the State has increased in recent years, whereas in the United States as a whole the number of persons per dwelling shows a small but constant decline—from 5.6 in 1890 to 5.2 in 1910. In Massachusetts it rose from 6.3 in 1890 to 6.6 in 1910.

<sup>1</sup> Massachusetts. Third Annual Report of the Homestead Commission, 1915. Public Document No. 103. Boston, 1916. 100 pp. Illustrated.

No figures more recent than 1891 seem to be available as to the tenement-house population, but in that year in Boston it was found that approximately 73 per cent of the population was living in rented tenements and boarding houses, and that 38,311, or about 8.24 per cent, were living in unclean, insanitary tenements, a number "far lower than the actual number of persons occupying unhealthful dwellings." In the winter of 1913-14 over 1,600 basement and cellar tenements were found to be occupied for living purposes, "indicating an enormous increase in the number of cellar and basement dwellers" since 1891, at which time 583 families, consisting of 1,805 persons, were so housed. Illustrations of insanitary and crowded conditions are presented.

The commission announces its belief that 25 years "filled with agitation and sacrificing effort" have not "wrought a cure or even brought any measurable relief." Many improvements have been made, but concentration of population, especially of the poor, has proceeded rapidly in these years, and where such concentration has occurred "it is almost impossible to bring or keep the habitations of the poor up to a decent livable standard."

A survey of other cities of the State seemed to indicate conditions similar to those existing in Boston, from which the commission emphasizes the need of a larger supply of homes within the means of the lower-paid working people.

Tenement-house living, declares the report, is not conducive to physical growth and the mental and moral development, especially of children.

Out of 311,396 persons living in Boston tenements in 1891, 73,144 (23.49 per cent) had no outside yard space; 228,680 (73.44 per cent) had no bathrooms; 583 families, comprising 1,805 (0.58 per cent) persons, lived in basements; and 688 families, comprising 1,651 (0.53 per cent) persons, in attics. Such habitations are unfit for adults. It is a crime against childhood and future citizenship to rear children in them, but there is evidence to indicate that they have increased rather than decreased in number.

Such conditions inevitably lead to excessive mortality among the young, for "wherever children have wholesome homes, with fresh air, sunlight, and room to play, the death rate drops." Tables are presented showing for the entire State an infant mortality rate per 1,000 births of 105.9 in 1914, as compared with 134 in 1908; and a child mortality rate of 24.6 per 100 deaths in 1914, as compared with 30.3 in 1908, both tables indicating an improvement due to attention being given to housing conditions in a number of cities.

That a large supply of more healthful homes would materially decrease these rates is indicated by the fact that the lowest rates are shown for cities in which one and two family houses predominate.

Another result of overcrowding and insanitary conditions is reflected in the large number of cases of tuberculosis among tenement



dwellers. Although the fight against this disease in Massachusetts has resulted in a reduction of the death rate from 185 per 100,000 in 1900 to approximately 113 per 100,000 in 1915, it appears that the death rate in counties containing cities with bad housing conditions is usually greater than in other counties. "Wherever numbers of insanitary, overcrowded tenements are found there mortality from tuberculosis is high." Thus "for the five years ending 1912 there were 5,306 deaths from tuberculosis in Boston, of which three densely populated wards with considerable bad housing furnished 369 (890 deaths per 100,000 population), leaving 4,937 (785 per 100,000 population) for the rest of the city, in many parts of which were to be found even greater density of population and worse conditions of housing than in these three wards." Dark rooms and overcrowded, insanitary tenements also tend, according to the commission, to produce delinquency and deficiency, a fact which appears to be amply supported by the experience of foreign cities to which the commission refers.

The suggestion that private enterprise may be effective in remedying the deplorable housing conditions by furnishing healthful, low-cost homes, available to the poorer classes of workmen, does not appeal to the commission, and the evidence seems to show that where this has been tried the result has not been altogether satisfactory.

Never yet, at any time or in any place where population increased, has private capital furnished enough suitable homes to satisfy the demand; and in places where population is stationary or declining, neglect usually reduces the supply below the need. In no country has the problem of sufficient healthful homes for workingmen been solved by private capital alone. \* \* \* The only thing that will surely attract capital into any enterprise is the prospect of profit. \* \* \* The cheap insanitary tenements pay best, therefore that is the kind of tenements we have in large numbers. The single-family house with its small garden plot seems to offer no attraction to capital. \* \* \* If private enterprise fails to provide enough decent houses for all, where is the supply to come from except through Government aid and encouragement? Experience nearly everywhere that such a method has been tried shows that it can be adopted without ultimate cost to the Public Treasury.

It is stated, however, that Government aid seems nowhere to have discouraged private enterprise, but rather to have stimulated and encouraged the flow of private capital into this field, "though not yet in amounts as great as are needed." The commission hopes for an opportunity to make a careful experiment for the purpose of ascertaining whether or not it is true that suitable low-cost homes for low-paid workers may be profitably built, and if so, that there will be but little difficulty in securing enough private capital for such enterprises.

Opportunity for more wholesome homes seems everywhere apparent, and by giving a table showing the area, population, and density

of population in 33 cities in Massachusetts in 1915, in five of which the population per acre exceeded 19 people, the commission points out how needless is the undue congestion in insanitary tenements. In such a case as Boston, for instance, with a density of population in 1915 of 27 persons per acre, the assessors' reports for 1914 showed 7,928 acres (28.7 per cent of the total usable land in the city) listed as vacant land.

When it is considered that 1 acre will comfortably house 8 families, comprising 40 individuals, in single-family houses, with a garden for each, it is seen that even in the cities of restricted territory and apparent density of population there should be no unwholesome congestion. \* \* \* As the number of persons per acre is much lower in other cities than in Boston, it is safe to conclude that the proportion of vacant land is much greater; \* \* \* it probably is more than 50 per cent of the total land in the other cities of the State. There are 422,796 acres of land within city limits in Massachusetts. If, as seems true from a consideration of the Boston situation, one-half of that land is vacant, then 211,398 acres of land within city limits are unoccupied—an economic waste beyond the power of calculation. \* \* \* Not half the opportunities within cities for healthful habitations are improved. Even in the most crowded of our cities there is room to spare. While hundreds of thousands are losing health and hope in crowded tenements, tens of thousands of acres within the limits of the cities themselves are untouched, and just outside their borders are limitless opportunities for expansion.

The problem appears to be one of good sanitation and proper distribution, which imply better houses and efficient city planning.

It has been suggested that many people prefer to live in the city in spite of higher living costs, and that comparatively few would desire to avail themselves of an opportunity to take possession of a house and small plot of ground. The commission, however, cites the experience of other communities which seems to show that where modern tenements or suburban or rural cottages or farms have been made accessible to working people and the cost brought within their means, the opportunity has been eagerly seized. The outside cost of these homesteads, it is believed, should not exceed \$2,000, the rental to be \$15 per month, and garden plots may range in size from 1,000 or 2,000 square feet for vegetables only to small farms of 1 to 5 acres.

The commission thus briefly summarizes the communal and individual results to be expected if such a policy as outlined is adopted by the State:

1. \* \* \* Were instruction in agriculture, facilities for following it, and homesteads brought within the reach of all, the opportunities for selfsupport while acquiring an education would be vastly increased, and there would remain but little excuse for the down-and-outs, or the men or women who sin against society because they "never had a chance." How great in diminishing wrongdoing will be the influence of good homes, instruction, and more ample opportunities for remunerative work it is difficult to conjecture, but it appears to offer hope of a new state of society. So successful have been experiments

abroad similar to this that Great Britain is perfecting extensive plans to provide in this way for its returning soldiers and its unemployed after the great war.

2. Such poverty and its ills as arise from lack of suitable opportunity would be sensibly diminished if not entirely abolished.

3. The general adoption of the commission's recommendations would tend to alleviate undue congestion of population, and so reduce the vice, immorality, delinquency, and inefficiency bred in slum conditions.

4. A higher average grade of citizenship would be realized. The single-family house owned by the occupant stimulates a better home life than the tenement, and gives a sense of really belonging to the community and having a personal stake in it. \* \* \* But still more important is the fact that the children will be reared in a wholesome environment, in contact with nature, and with ample opportunity both for play and for natural employment.

5. Should congestion of population be lessened, either rents would decrease, or better accommodations would be offered. Should the provision of homesteads be of great extent, the cost of living would be affected to the advantage of the poor. Should considerable numbers of tenement dwellers take advantage of an opportunity to cultivate gardens, or larger suburban or rural tracts, the market demand for such goods as they produced would be lessened and the supply increased.

#### SOME RECENT HOUSING LITERATURE.

That there is a growing interest in the housing of the industrial classes of our population, that a systematic effort is being made to solve the problem of housing, and that there is an increasing realization of congestion as a result of the rapid growth of cities may be inferred from some of the recent literature on the subject. It is being realized in some quarters that inadequate housing conditions may become a serious handicap to the competitive industrial strength of a city.

A recent report to the Chamber of Commerce of Bridgeport, Conn., by John Nolen, city planner and investigator for the chamber of commerce of that city, expresses the opinion "that the continued success and efficiency of the present manufacturing establishments of the city as well as the future development of Bridgeport as an industrial city are seriously menaced by the comparatively higher rental values of real estate and general inadequacy of housing conditions as compared with other and competing manufacturing cities."<sup>1</sup> financial phases of the problem of adequate housing, types of con-

The report in question is principally an analysis of the financial phases of the problem of adequate housing, types of construction of houses and land values being prominent factors in the discussion.

On the basis of Mr. Nolen's discussion of means to provide more adequate housing facilities for Bridgeport (a new so-called munition town), the committee of the chamber of commerce acknowledges

<sup>1</sup> More Houses for Bridgeport. Report to the Chamber of Commerce, Bridgeport, Conn., by John Nolen, city planner. Fellow of the American Society of Landscape Architects. Cambridge, Mass. August, 1916. 62 pp. Illustrated.



the need of financial assistance in providing a sufficient number of houses to relieve what is characterized as an "acute situation." The committee has taken the first step in that development, and has organized itself as the Bridgeport Housing Co. This company proposes to provide dwellings for 1,000 families, on terms which will afford a reasonable return to the stockholders of the corporation, and at the same time charge only normal rents. The committee recommends that the policy of the company "should be not to reduce rents below the normal and general rental values of similar property, or be in any way antagonistic to the other building and renting interests in Bridgeport."

The report is illustrated with proposed types of low-cost houses, and shows actual costs of the different types; nothing is submitted in the way of house construction which has not been actually tried. The houses proposed are those which may be occupied by working-men receiving approximately from \$15 to \$30 a week.

The following appendixes accompany the report: (1) Industrial plants at Bridgeport, Conn.; (2) list of low-cost housing developments in the United States; (3) prospectus of the Billerica Garden Suburb, Billerica, Mass.; (4) prospectus of the Neponset Garden Village Co., East Walpole, Mass.; (5) copartnership housing for American cities, prepared by the National Conference on Charities and Correction.

The report of the housing department of the Women's Municipal League of Boston, another volume of recent appearance on the housing problem, is mainly a discussion of existing sanitary conditions in the tenement houses of Boston, and an account of the struggle for an adequate tenement law.<sup>1</sup>

In its fight against poor housing conditions the League claims credit for legislation in 1914 limiting the occupancy of cellar and basement tenements, and that the influence of the housing department of the League during the five years of its existence has made for a noticeable improvement in general housing conditions, especially in the North End.

In spite of the improvement recorded, generally bad housing conditions are declared to be found at the present time, conditions which call for serious consideration and vigorous action by the health department, but which as yet "have received only the most superficial treatment." These undesirable conditions are set forth in the report by means of photographs and detailed descriptive accounts.

The Brooklyn Bureau of Charities through its tenement-house committee contributes a discussion of the problem of both the three-family house and two-family house in Brooklyn, and an account of

<sup>1</sup> The Women's Municipal League of Boston. Dept. of Housing. Bulletin, February, 1916 (vol. 7, No. 3). 79 pp.

its attempts to secure an adequate tenement law.<sup>1</sup> With this is also submitted a report on land overcrowding in Brooklyn, prepared for the committee by Mr. Herbert S. Swan. "Nowhere in the world," this study declares, "except in Manhattan and the Bronx is land utilized as intensely as in Brooklyn." The average density of the tenements erected in 1915 is reported as 724 persons per acre; the maximum density was over 1,600 per acre. This estimate refers to land actually used for new tenements, excluding streets.

The three-family house is declared to be vanishing, although its disappearance has evidently taken place only after considerable conflict with certain interests. The proportion of the population housed in two-family houses "has suffered a most serious decrease, the number accommodated thus now being scarcely more than two-fifths of the annual average for the past 10 years." On the other hand, the annual number of one-family dwellings erected in Brooklyn during the last 10 years has remained fairly constant.

The committee has carried on considerable educational work instructing landlords of tenements in their responsibilities and rights under the law. It has recently established a model demonstration flat in Williamsburg where practical instruction is given in cooking and housekeeping. The flat is so furnished as to give a concrete illustration of the principles of economical and desirable housekeeping.

For Providence, R. I., there has appeared a study<sup>2</sup> of present conditions and tendencies in housing in that city, including a comprehensive survey of various aspects of the housing problem; types of house construction; use and disposition of land; supply of dwellings; fire hazard; standards of living; building and management, with a comparison of conditions in Providence with those existing in surrounding villages.

For three reasons this report on "The Houses of Providence" emphasizes the character of the housing provided for immigrant groups, (1) on account of the large proportion of foreign-born found in Rhode Island, (2) on account of the fact that two of these immigrant groups are setting upon Providence the ineradicable stamp of their present standards of housing, and (3) on account of the greater number of dwellings in the city which fall below the minimum standard that should be permitted, built for and by the immigrant peoples. The American born are said generally to live in dwellings that are sanitary and that meet most housing requirements. Opposition is registered by the report against the use and

<sup>1</sup> The progress of housing reform in Brooklyn. A report of the Brooklyn Bureau of Charities tenement house committee, and a study of land overcrowding in Brooklyn.

<sup>2</sup> The houses of Providence. A study of present conditions and tendencies with notes on the surrounding communities and some mill villages, by John Ihlder, Madge Headley, Udetta D. Brown, associated. 1916.

prevalence of the so-called "three decker." It is felt, though, "that its course is almost run in Providence."

Although sanitary conditions are discussed at length in the report, they are considered as "less important than the type of house because more easily changed."

The recommendations of the report include the matter of a housing code, city planning, aid from citizens' organizations, and future studies of the housing problem. The drafting of a thoroughgoing code to check bad tendencies is recommended, such a code to be either in the form of a general law applying to all cities and towns of Rhode Island, or as a special act applying only to Providence. A general law, however, is preferred which should include such fundamental points as land overcrowding, sanitation, fire hazard, alteration of houses, garbage and ash disposal, residence districting, regulation of basement rooms and hillside dwellings, and ratproofing of buildings. It is also recommended that absentee landlordism should be dealt with by requiring the owner of real estate to file his own name and address or that of a responsible agent.

Of immediate interest to the student of industrial housing is the section describing housing conditions in some of the small towns surrounding Providence. It is noted that increasing facility of communication has led to both private and speculative building on the borders of the mill towns. The main problems created by the developments which are practically continuous parts of the metropolitan area are those of proper sewage disposal and water supply.

The California Commission of Immigration and Housing has outlined a plan for a housing survey,<sup>1</sup> and at the same time invites correspondence concerning the details of its plan, welcomes any suggestions, and offers the services of an expert whenever practicable to any community requiring assistance in organizing and starting a housing survey. The commission has also incorporated its ideas of model tenement house law in a proposed draft of an act.<sup>2</sup>

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#### INDUSTRIAL HOUSING AT TWELFTH ANNUAL CONVENTION OF THE AMERICAN CIVIC ASSOCIATION.

At its last session, Friday morning, December 15, the Twelfth Annual Convention of the American Civic Association, which met in Washington, D. C., December 13, 14, and 15, 1916, had up for consideration the topics of "City planning" and "Providing for the

<sup>1</sup> A plan for a housing survey. Commission of Immigration and Housing of California. California, 1916.

<sup>2</sup> Draft of proposed tenement-house law. Commission of Immigration and Housing of California. 1916.



housing of industrial populations." At this session there was read a paper written by John Nolen, city planner, Cambridge, Mass., on "A good home for every wage earner," and one written by A. F. Muller (now deceased), manager of the Kenosha Homes Co., Kenosha, Wis., on "How Kenosha will spend over a million dollars to provide for housing its industrial population."

The reading of these papers and the discussion which followed prolonged the meeting into the afternoon. At the continued meeting further excerpts were read from the above-mentioned papers by the secretary of the association, after which G. G. Wheat, Woods Hole, Mass., read a paper on "Economic phases of industrial housing." A paper on "Housing surgery for Dublin, Ireland," by Richard B. Watrous, secretary of the association, was not read but will appear in the printed proceedings of the association.

John Nolen discussed housing from its general economic and financial aspect. He pointed out that one of the most important methods of reducing the cost of a suitable house for the working man would be the adoption of the standardizing principle which would come from wholesale building operation. How to invest 25 per cent of the working man's wages so as to secure a minimum desirable house of four or five rooms constitutes the real housing problem. He contended that although employers could not be held responsible for both the lack and the inadequacy of housing, it was to their interest to act promptly and on a large scale. An investment by employers in housing is a part of the total investment necessary to the carrying on of business and would not mean more than an increase of four or five per cent on the capitalization of their business.

The paper by Mr. Muller explained the method by which the city of Kenosha, through its manufacturers and public interests, was establishing homes for some of its industrial population. The Kenosha Homes Co. is a stock company, organized for the building of homes for working men, and having a capital of \$25,000. This company formed an agreement with the Kenosha House Building Co., a group of local builders, for the erection of 400 houses, to cost between \$1,500 and \$2,500. The principle involved in this enterprise is the adaptation to the building of houses of the principles of large scale manufacturer. "The Kenosha Homes Co. is not building houses, it is manufacturing them."

Frame houses of the single and double type are being constructed. They consisted of five rooms and bath in the bungalows and six rooms and bath in the other houses. The houses are to be sold by the Kenosha House Building Co. The applications for purchase are turned over to the Kenosha Homes Co. for approval before sale is made. As this latter company is closely related to the manufacturers'

association of the locality, there are at its disposal complete records of every factory employee of members of the association. In this way minute investigation can be made into the character and ability of each applicant.

The houses are sold on a minimum payment of \$100 down and a minimum payment of \$18 monthly. If the workingman owns his lot no cash payment is necessary.

The cost of the houses averages from \$1,700 to \$1,900; the lot, which is generally 50 by 100 feet, costs \$300; and improvements, \$200, including sewer, water, gas, concrete walks, grading, and planting. For its work the Homes Co. charges a fee of 5 per cent on the purchase price, and the construction company gets 10 per cent above the cost of the house, which brings the total cost of each house purchased to from \$2,500 to \$2,700.

Mr. Wheat pointed out the large part which housing investment forms of the Nation's wealth, and that in the investment of an equally large sum in other enterprises expert advice and management was obtained, while the contrary is the case in housing investments. Economies in housing are to be secured through improved business management and through the improvement in the character of the security. He stated that the true measure of the cost of house building is found not in the initial cost of the house but in the annual carrying charges. He emphasized the part that labor plays in the construction of houses, declaring that "labor is not our chief source of loss and waste, as some building operators selfishly claim."

Several members at the session took part in the discussion. Charles A. Beck, of the Woodlawn Co., Wilmington, Del., described that enterprise. This company has since 1903 been engaged in developing a 20-acre tract in which it has invested \$600,000, for the construction of houses for rent only. Of the development 5 acres have been set aside for parks. A four-room, one-family, detached house rents for \$13.50 per month, while the four-room flats, one family living upstairs and one family downstairs, rent for \$11.50 and \$12. He emphasized the need of lower rent, \$10 to \$15 a month, in order to reach the right sort of people. He stated that the company finds that these houses are taken by persons able to pay higher rentals, thus shutting out the workers having low wages, for whom the houses were primarily designed. He confessed his inability to suggest a remedy for this. Several speakers emphasized the importance of home owning in the maintaining of families and the making of good citizenship. Much of the discussion broadened out into the general sociological welfare aspects of the problem.

After the discussion Richard B. Watrous, secretary of the American Civic Association, spoke briefly on the topic of his paper,

"Housing surgery for Dublin, Ireland." He gave a brief summary of the plans recently adopted for what may be termed the rebuilding of Dublin, submitted by Prof. Patrick Abercrombie, of Liverpool, in a competition sponsored by Lord and Lady Aberdeen. The plan contemplates changes in the building of Dublin, to provide better housing, access and transportation, and more embellishment. Mr. Watrous stated that \$50,000,000 had now been provided in the way of loans with which to make possible the building of low-cost sanitary houses for the crowded working classes in Dublin—a remarkable feat, he declared, in view of the continuance of the war.

### SOCIAL INSURANCE IN GERMANY—STATISTICS OF OPERATION, 1914.

Summarized statistics of the operation of the German workmen's insurance system for the years 1911, 1912, and 1913, were presented in the May, 1916, issue of the Monthly Review. In the following tables these statistics are continued to include 1914. Data are available for accident and invalidity insurance only. Sickness insurance statistics for 1914 have so far not been published by the Imperial Insurance Office on account of incomplete returns from the sick funds.

#### NUMBER AND PER CENT OF POPULATION IN GERMANY COVERED BY EACH CLASS OF SOCIAL INSURANCE, 1909 TO 1914.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vols. 32 to 37. Berlin, 1911-1916.]

Year.	Average total population.	Accident insurance.		Sickness insurance.		Invalidity and old-age insurance.	
		Number of persons insured. <sup>1</sup>	Per cent of population.	Number of persons insured. <sup>2</sup>	Per cent of population.	Number of persons insured.	Per cent of population.
1909.....	63,879,000	23,767,000	37.2	13,404,298	21.0	15,444,300	24.2
1910.....	64,551,000	24,154,000	37.4	13,954,973	21.6	15,659,700	24.3
1911.....	65,429,000	24,627,000	37.6	14,518,764	22.2	15,878,000	24.3
1912.....	66,096,000	24,990,000	37.8	15,110,046	22.9	16,099,400	24.4
1913.....	66,835,000	25,800,000	38.6	14,555,669	21.8	16,323,800	24.4
1914.....	67,790,000	24,700,000	36.4	.....	.....	16,551,500	24.4

<sup>1</sup> After deduction of duplications for persons insured in more than one trade accident association, estimated to number 3,300,000.

<sup>2</sup> Including miners' sick funds.



# 134 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

## STATISTICS OF THE GERMAN ACCIDENT INSURANCE SYSTEM, 1885 to 1914.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vol. 37, 1916. Berlin, 1916.]

	1885 to 1914	1912	1913	1914	Amount per accident compensated.		
					1912	1913	1914
Accidents compensated.....	2,806,052	1,014,122	1,010,495	1,000,251	.....	.....	.....
Accidents compensated for the first time during the year.....	.....	137,089	139,633	124,086	.....	.....	.....
Ordinary receipts:							
Contributions of employers..	\$751,234,172	\$55,877,832	\$46,333,983	\$42,174,504	\$45.24	\$45.85	\$42.16
Interest, etc.....	107,793,889	7,784,671	8,231,920	8,375,006	7.68	8.15	8.37
Total ordinary receipts.....	859,028,061	63,662,503	54,565,903	50,549,510	52.92	54.00	50.53
Ordinary disbursements:							
Total compensations.....	1634,278,758	140,532,019	142,039,868	142,542,690	39.97	41.60	42.53
Sickness care (included in total compensations).....	47,932,391	2,901,339	3,118,395	2,964,266	2.86	3.09	2.96
Costs of administration.....	112,312,033	7,315,834	7,674,786	7,310,503	7.21	7.60	7.31
Total ordinary disbursements.....	1717,497,315	149,312,315	151,206,771	151,310,634	48.63	50.67	51.30
Net assets.....	.....	138,932,738	142,291,870	141,530,770	137.00	140.81	141.50
Compensation payments:							
Medical treatment.....	15,266,558	901,734	984,201	995,054	.89	.97	1.00
Care during waiting time ....	3,936,591	323,870	306,401	228,956	.32	.30	.23
Hospital treatment.....	22,514,562	1,306,001	1,421,098	1,351,578	1.29	1.41	1.35
Benefits to dependents during treatment.....	6,214,679	369,733	406,694	388,654	.36	.40	.39
Disability benefits.....	451,951,314	28,160,684	28,500,310	28,728,932	27.77	28.20	28.72
Lump-sum settlements.....	7,254,573	772,096	1,214,776	1,287,176	.76	1.20	1.29
Funeral benefits.....	3,403,424	196,540	207,227	187,615	.19	.21	.19
Survivors' pensions.....	118,165,810	8,159,973	8,615,124	8,986,357	8.05	8.53	8.98
Lump-sum payments to widows.....	4,191,727	270,892	285,957	244,045	.27	.28	.24
Lump-sum payments to aliens.....	1,379,520	70,496	98,080	144,323	.07	.10	.14
Total disbursements for compensation.....	1634,278,758	140,532,019	142,039,868	142,542,690	39.97	41.60	42.53

<sup>1</sup> In 1909 the Post Office Department paid out compensations amounting to \$38,056,200, for the account of the insurers, which was not refunded by the latter. By the law of July 15, 1909, the above advance was commuted into a floating debt which is to be refunded with 3½ per cent each year and bears 3½ per cent interest. In the present table the entire amount of the floating debt is included in the compensation paid during the period 1909-1914, but not in the total ordinary disbursements. There is included in the total ordinary disbursements for each year, 1912, 1913, and 1914, so much of it as is paid on account each year, including principal and interest.

STATISTICS OF THE INVALIDITY AND OLD-AGE INSURANCE SYSTEM IN GERMANY,  
1891 TO 1914.

[Source: Statistisches Jahrbuch für das Deutsche Reich, vol. 37, 1916. Berlin, 1916.]

	1891 to 1914	1912	1913	1914
Number of invalidity pensions in force.....	2,370,549	1,065,700	1,099,783	1,128,956
Number of sickness pensions in force.....	<sup>1</sup> 162,609	27,383	27,711	28,554
Number of old-age pensions in force.....	539,427	105,480	101,977	98,089
Number of widows' and widowers' pensions in force..	<sup>2</sup> 22,121	3,811	11,500	21,579
Number of widows' sickness pensions in force.....	799	110	350	709
Number of orphans' pensions.....	70,121	13,692	37,000	68,014
Number of widows' moneys paid.....		4,118	8,022	10,273
Number of orphans' settlements paid.....		108	460	887
Ordinary receipts:				
Contributions of employers.....	\$449,824,712	\$32,536,813	\$34,504,359	\$31,797,847
Contributions of insured persons.....	449,824,712	32,536,813	34,504,359	31,797,847
Subsidy of the Empire.....	206,741,009	13,106,494	13,929,212	14,759,808
Interest, etc.....	203,949,150	17,005,148	16,866,275	18,131,340
Total ordinary receipts.....	1,310,339,583	95,185,268	99,804,205	96,486,842
Ordinary disbursements:				
Total disbursements for benefits.....	697,299,945	48,835,672	51,964,111	55,693,143
Sick benefits (included in total benefits).....	64,306,410	6,060,123	6,805,872	7,658,840
Costs of administration.....	76,952,207	5,942,265	5,858,727	5,812,341
Total ordinary disbursements.....	774,252,152	54,777,937	57,822,838	61,505,483
Net assets.....		459,124,681	501,107,001	536,088,360
Benefit payments:				
Medical treatment.....	60,720,036	5,633,341	6,303,501	7,216,231
Additional sick benefits.....	3,586,374	426,782	502,370	442,609
Care in institutions.....	1,998,438	261,656	298,642	348,266
Invalidity pensions.....	472,494,117	37,749,513	39,816,115	41,992,030
Sickness pensions.....	10,209,415	761,505	822,338	908,684
Old-age pensions.....	117,601,179	3,344,543	3,269,573	3,173,754
Other benefit payments.....	30,690,386	658,332	951,572	1,611,569
Total disbursements for benefits.....	697,299,945	48,835,672	51,964,111	55,693,143

<sup>1</sup> Sickness pensions paid only since 1900.<sup>2</sup> Survivors' insurance has been applicable only since 1912.NUMBER AND AVERAGE AMOUNT OF PENSIONS NEWLY AWARDED UNDER THE  
INVALIDITY AND OLD-AGE INSURANCE LAW, 1909-1914.

[Source: Amtliche Nachrichten des Reichs-Versicherung-Amt., Berlin.]

Year.	Invalidity pensions.		Sickness pensions.		Old-age pensions.		Widows and widowers' pensions.		Widows' sickness pensions.		Orphans' pensions.	
	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.	Num-ber.	Aver-age amt.
1909.....	116,294	\$41.60	12,884	\$41.45	11,036	\$38.93						
1910.....	114,755	42.11	12,287	41.83	11,625	39.11						
1911.....	118,158	42.86	11,789	42.24	11,585	39.34						
1912.....	124,825	44.50	17,570	45.76	12,111	39.54	3,811	\$18.34	110	\$18.46	13,962	\$19.25
1913.....	134,161	46.51	11,809	48.45	11,905	39.75	8,479	18.49	303	18.59	25,916	19.07
1914.....	101,161	47.79	17,490	49.38	11,715	39.98	11,304	18.77	637	18.95	107,995	18.59

## EMPLOYMENT CONDITIONS IN FOREIGN COUNTRIES.

## CANADA.

The Canadian Labor Gazette of October, 1916, reports that industrial activity was well maintained during September. An incidental slackening was, however, noted as a result of the shortage of labor or delay in the delivery of materials. This shortage of labor was particularly pronounced in agricultural operations, coal mining, and in some branches of manufacturing. "The supply of female help was still reported inadequate in a number of manufacturing lines."

In the Province of Ontario it is reported that: "Woman labor was in demand and some factories found it hard to get sufficient help; stores and offices were employing girls in places formerly occupied by men." "A machine shop at Galt was employing female help in special work in three shifts of eight hours each." In British Columbia: "The replacing of male clerks \* \* \* by women was steadily continued in most banks of the city (Vancouver) during the past month, in some instances amounting to 20 per cent of their staff."

A special inquiry into employment by municipal governments showed that municipal work had been decreasing in volume since July, as indicated both by the number of employees temporarily engaged and by the amount of wages paid. During August there was an increase of 23 per cent in the demand for workers as compared with July, as shown by reports from employment bureaus. The number of persons placed constituted a daily average of 1,124, as compared with 763 in July. The proportion of vacancies filled to vacancies notified was 49 per cent, as compared with 41 per cent in July.

The following statement on employment for civic employees in eight cities in Canada is reproduced from the Labor Gazette (p. 1643):

## EMPLOYMENT FOR CIVIC EMPLOYEES IN EIGHT CANADIAN CITIES.

The department has been trying to arrive at some measurement of the volume of employment afforded by the larger city corporations in Canada, and to ascertain to what extent civic employment is seasonal. The officials in 12 of the larger cities were communicated with by letter and they were also interviewed by correspondents of the Labor Gazette. They were requested to give monthly the number of employees temporarily employed and the amount of wages paid to these workers in the first fortnight of the month. The correspondents of the Labor Gazette were also instructed to secure the same information with regard to the employees of contractors on civic work. Employees temporarily employed were the only class included in the inquiry, as employment for such civic employees as policemen and firemen who are on a permanent basis fluctuates but slightly. Already returns have been received from nine cities, but in one case the information was not sufficiently definite to be included. It is hoped that the department will soon be able to secure returns from all of the 12 cities.



The statements received are summarized in the following table. It appears that employment on civic works has been decreasing in volume since July, as indicated both by the number of employees temporarily employed and the amount of wages paid such employees in the first fortnight of the month.

EMPLOYMENT (BOTH CONTRACT AND MUNICIPAL WORK) AFFORDED WORK-PEOPLE TEMPORARILY EMPLOYED BY EIGHT CITY CORPORATIONS, JULY TO SEPTEMBER, 1916.

City.	Number of employees temporarily employed in first fortnight in—			Amount of wages paid employees temporarily employed in first fortnight in—		
	July.	August.	September.	July.	August.	September.
Montreal.....	5,412	4,922	4,314	\$135,896.94	\$134,610.02	\$111,094.58
Ottawa.....	725	572	505	18,031.33	14,276.95	14,241.78
Hamilton.....	460	432	453	14,911.55	12,178.79	13,012.68
Regina.....	367	347	290	11,694.91	10,595.57	9,390.05
Moose Jaw.....	152	153	105	4,523.50	5,293.55	3,613.05
Calgary.....	877	933	816	31,000.63	34,952.27	27,587.39
Edmonton <sup>1</sup> .....	562	517	490	17,022.75	15,839.29	16,431.83
Victoria.....	361	376	336	11,452.65	12,931.00	10,639.90
	8,916	8,252	7,309	244,534.26	240,677.44	206,011.26

<sup>1</sup> Contract work not included.

#### FRANCE.<sup>1</sup>

The French labor office, through its factory inspectors, has made several inquiries concerning the amount of employment prevailing at different times during the period of the war. The most recent inquiry related to conditions on April 1, 1916. Previous investigations were made on August 1 and October 1, 1914, the 1st of January and July, 1915, and the 1st of January, 1916. The method consists in comparing the number employed in identical establishments on a specified date with the normal number employed prior to the war.

The establishments covered by the investigation numbered 49,728, employing in normal times 1,765,434 workmen. The inquiry of April, 1916, showed that of this number of establishments 41,610, or 84 per cent, were active, and that of the total number of workmen covered by the inquiry 1,423,283, or 81 per cent, were employed.

This might lead to the erroneous conclusion that 19 per cent of the workers were unemployed on April 1, 1916. It must, however, be considered that the number of men mobilized since the outbreak of the war forms about 24 per cent of the total number of workers of both sexes employed under normal conditions, so that on April 1, 1916, the number of workers employed was actually 5 per cent greater than under normal conditions.

<sup>1</sup> Bulletin du Ministère du Travail et de la Prévoyance Sociale. Vol. 23, No. 6. June, 1916. pp. 185 ff. Paris, 1916.

The following table presents data showing the number of persons employed at the time of four different inquiries made by the French labor office since the outbreak of the war, as compared with the number employed under normal conditions:

NUMBER OF PERSONS EMPLOYED IN IDENTICAL ESTABLISHMENTS BEFORE THE OUTBREAK OF THE WAR, AND NUMBER AND PER CENT EMPLOYED ON AUGUST 1, 1914, JANUARY 1, 1915, JANUARY 1, 1916, AND APRIL 1, 1916, BY INDUSTRIES.

Industries.	Number of persons employed before the outbreak of the war.	Number of persons employed on—				Per cent of normal number employed on—			
		Aug. 1, 1914.	Jan. 1, 1915.	Jan. 1, 1916.	Apr. 1, 1916.	Aug. 1, 1914.	Jan. 1, 1915.	Jan. 1, 1916.	Apr. 1, 1916.
Food products.....	107,094	45,418	70,973	87,717	87,726	42	66	82	82
Chemical industries.....	89,335	37,836	57,948	78,233	79,847	42	65	88	89
Rubber, paper, and cardboard.....	63,780	21,522	32,965	44,559	45,798	34	52	70	72
Printing and publishing.....	46,638	14,919	18,883	21,615	22,465	32	40	46	45
Textile industries.....	408,599	133,765	246,284	303,296	305,392	33	60	74	76
Clothing, millinery, etc.....	145,524	48,880	85,077	104,646	110,878	34	58	72	79
Hides and leather.....	63,701	23,570	39,159	49,626	50,630	37	61	78	78
Woodworking.....	102,987	19,795	38,173	55,705	60,093	19	37	54	58
Metal industries, base.....	448,178	141,832	274,422	466,022	496,166	32	61	104	111
Fine metals.....	11,240	983	2,036	3,738	4,071	9	18	33	36
Precious stones.....	2,620	414	820	1,247	1,251	16	31	48	48
Building trades.....	73,882	15,599	19,475	29,977	34,935	21	26	41	47
Stoneware, earthenware, and glassware.....	75,708	13,809	24,877	33,118	34,084	18	33	44	45
Transportation and storage	33,013	15,368	20,288	26,834	28,103	47	61	81	85
Miscellaneous commercial establishments.....	93,135	45,999	51,625	59,824	61,844	49	55	64	66
All industries.....	1,765,434	579,709	983,005	1,366,157	1,423,283	33	56	77	81

The factory inspectors report that the number of female workers employed in industrial, commercial, and State establishments continues to increase. Their report contains a list of the various occupations in which women were employed and includes nearly all industries.

As indicating the activity in coal mining, the Central Association of Coal Mine Owners of France reported that in April, 1916, a total of 44,399 miners were employed in the affiliated collieries. All of these miners worked full time (6 days per week) or overtime, the average being 6.47 days per week. It is noted that in normal times the collieries affiliated with the association have a pay roll of approximately 190,000 men.

#### GERMANY.

#### EMPLOYMENT.

During 1915 the average number of free employment offices reporting to the Imperial Statistical Office was 960. Of this total, 437 were communal offices or offices subsidized by communes; 73 were other general free employment offices; 46 were operated on the equi-

partisan (*paritätische*) plan; 78 were maintained by employers' organizations; 180 by workmen's organizations, and 146 by guilds. The number of applicants placed by each class of these bureaus during 1915 is shown in the following table, arranged by industry groups:

NUMBER OF APPLICANTS PLACED BY GERMAN PUBLIC EMPLOYMENT BUREAUS, BY SEX AND OCCUPATIONAL GROUPS, 1915.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 98.]

Occupational groups.	Number of applicants placed in situations by—											
	Communal bureaus and bureaus subsidized by communes.		Other general or public welfare employment bureaus.		Equal-partisan bureaus.		Bureaus of employers.		Guild bureaus.		Bureaus of workmen's organizations.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Agriculture, gardening, etc.	71,498	19,301	1,397	85			2,195	134			714	1
Mining, smelting, etc.	8,916	101	77									
Stones and earths	2,785	43	11				499				130	
Metal working, machinery	93,192	8,270	1,302		370		234,605	21,899	9,261		16,260	460
Chemical industries	7,503	2,171	7				7,373		4		528	6
Textiles	5,336	14,102	24	172			7,941	6,989	3		407	115
Paper	10,450	12,901	145		307	360	12		301	3	537	537
Leather	8,226	4,811	241		51		99		915	2	1,247	116
Woodworking	38,354	484	693		15,314	4	1,117		906	19	5,690	23
Foodstuffs, beverages, etc.	21,737	11,229	563		3,911		787	163	32,426	17	4,922	710
Clothing and cleaning	25,137	104,563	1,409	555	329		106	1,085	9,372	296	6,767	1,833
Building trades	57,803	88	500	5	2,462		20,080		1,713		6,594	
Printing trades	1,020	3,402	4		16,824	1,345	58	70	4	93	22,921	2,614
Artistic trades	190	17	4				21				151	
Machine hands, firemen, and sundry factory workers	109,715	45,114	884	91	1,406		23,889	4,186	36		1,865	225
Commerce	7,525	8,916	302	350			1	1	33	114	10	6
Hotels, restaurants, etc.	87,584	80,733	17	66	8,163	972	3,128	3,681	16,144	4,488	42,642	4,651
Other labor and domestic service	624,047	379,120	11,038	21,250	1,864	847	71,708	413	1,258	441	31,566	1,073
Professions	6,749	1,873	27	37			1				147	319
Apprentices of all trades	9,589	3,939	16	24			867	92			15	1
Miscellaneous, not specified	1,080	387	2,572	7			5,761	656			75	11
Total	1,198,436	701,565	21,233	22,642	51,001	3,528	380,248	39,369	72,376	5,473	143,188	12,701
Per cent	64.2	89.3	1.1	2.0	2.7	0.5	20.4	5.0	3.9	0.7	7.7	1.6

The above figures make it evident that the communal employment offices and those subsidized by communes place the largest number of applicants, i. e., 64.2 per cent of all male applicants and 89.3 per cent of all female applicants placed by all free employment offices. Next in importance are the employers' offices maintained by large corporations and cartels, chiefly in the iron and steel and machinery industries.



The state of the labor market during the individual months of 1908, 1912, 1913, 1914, and 1915 is indicated in the following table, which shows the relation between the number of vacancies and applications in employment offices reporting to the Imperial Statistical Office:

NUMBER OF APPLICANTS FOR EMPLOYMENT PER 100 VACANCIES IN GERMAN FREE EMPLOYMENT OFFICES, BY MONTHS, 1908 to 1915.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 98.]

Month.	Number of applicants per 100 vacancies.											
	1908		1912		1913		1914		1915		Average, 1908-1915.	
	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.	Male.	Fe-male.
January.....	217	87	192	100	191	98	234	105	125	167	198	107
February.....	220	77	178	88	190	91	218	97	113	172	191	98
March.....	172	76	145	84	168	87	173	92	98	152	156	92
April.....	175	83	150	92	160	96	161	94	100	165	150	98
May.....	181	91	153	97	166	100	172	100	99	158	155	102
June.....	173	88	146	101	168	101	168	101	96	157	152	104
July.....	178	95	140	97	174	103	158	99	98	165	150	108
August.....	190	93	146	92	178	101	248	202	98	165	163	119
September.....	182	91	141	92	160	99	200	183	89	170	149	116
October.....	211	110	148	106	178	122	154	191	89	182	153	132
November.....	287	125	173	122	219	143	140	189	89	179	173	146
December.....	330	112	175	106	218	123	124	158	90	151	178	125
Average for the year .	186	89	155	97	179	103	177	132	99	165	.....	.....

The preceding table brings out the fact that in August, 1914, after the outbreak of the present war, the number of male applicants for employment was more than twice as large as the number of vacancies. During the subsequent months of 1914 and the first months of 1915 this excess of applicants over vacancies decreased gradually, and since March, 1915, conditions have been reversed, the number of vacancies being in excess of the number of applicants. In the case of female applicants, on the other hand, whose number in normal times is generally lower than the number of vacancies, there has, ever since the outbreak of the war, been a constant excess of applicants over vacancies.

Since August 1, 1915, free employment bureaus have been legally obligated to report to the Imperial Statistical Office twice a week (Wednesday and Saturday) the number of applications and vacancies on file on the day in question. Below is given a summary tabulation of these reports for the last Saturday of each month for the year ended July, 1916.

## STATE OF THE LABOR MARKET, AUGUST, 1915, TO JULY, 1916, BASED ON REPORTS OF FREE EMPLOYMENT OFFICES.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 114.]

Date of report.	Number of applications on file.					Number of vacancies on file.				
	Number of offices reporting.	Agricultural labor.	Industrial labor (skilled and semi-skilled).	Unskilled labor.	Total.	Number of offices reporting.	Agricultural labor.	Industrial labor (skilled and semi-skilled).	Unskilled labor.	Total.
August 28, 1915.....	426	437	19,982	12,406	32,825	483	3,454	59,549	8,174	71,177
September 25, 1915.....	394	422	21,079	10,630	32,131	483	3,814	62,910	7,300	74,024
October 30, 1915.....	381	339	20,188	9,478	30,005	430	3,138	62,252	5,998	71,388
November 27, 1915.....	348	375	19,522	8,471	28,368	427	2,599	63,023	6,239	71,861
December 18, 1915 <sup>1</sup> .....	332	298	17,432	7,689	25,419	424	2,479	59,961	6,198	68,638
January 29, 1916.....	353	439	24,685	12,724	37,848	432	3,449	56,170	5,535	65,154
February 26, 1916.....	413	408	30,142	12,895	43,445	479	3,627	57,700	6,523	67,850
March 25, 1916.....	403	653	24,124	13,102	37,879	512	4,508	62,805	6,525	73,838
April 29, 1916.....	423	680	21,888	13,364	35,932	499	3,655	61,555	7,655	72,865
May 27, 1916.....	423	865	23,734	12,650	37,249	516	3,246	64,029	6,735	74,010
June 24, 1916.....	402	556	21,354	12,898	34,898	508	2,969	66,878	7,349	77,196
July 29, 1916.....	429	602	22,916	11,237	34,755	552	3,174	68,663	11,376	83,213

<sup>1</sup> On account of the holidays only a small number of employment offices had reported for the last Saturday in December. The data reported for December 18 were therefore inserted in this table in order to show data more suitable for comparison.

The fact that the number of employment offices reporting on undisposed of applications is not the same as that of offices reporting on unfilled vacancies makes a correct comparison of the data shown in the preceding table under these two headings very difficult. Nevertheless, it may safely be concluded that in the year under review there was a large excess of vacancies over applications for agricultural labor and skilled and semiskilled industrial labor, while the number of applications for unskilled labor considerably exceeded the vacancies.

## UNEMPLOYMENT IN GERMAN TRADE-UNIONS.

The state of unemployment among members of trade-unions during each month of the period 1907-1916 is shown in the following table:

## UNEMPLOYMENT AMONG GERMAN TRADE-UNIONS EXPRESSED IN PER CENT OF TOTAL MEMBERSHIP, 1907 TO 1916.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 121.]

End of—	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	Average 1907-1913.
January.....	1.7	2.9	4.2	2.6	2.6	2.9	3.2	4.7	6.5	2.6	2.9
February.....	1.6	2.7	4.1	2.3	2.2	2.6	2.9	3.7	5.1	2.8	2.6
March.....	1.3	2.5	3.5	1.3	1.9	1.6	2.3	2.8	3.3	2.2	2.1
April.....	1.3	2.8	2.9	1.8	1.8	1.7	2.3	2.8	2.9	2.3	2.1
May.....	1.4	2.8	2.8	2.0	1.6	1.9	2.5	2.8	2.9	2.5	2.1
June.....	1.4	2.9	2.8	2.0	1.6	1.7	2.7	2.5	2.5	2.5	2.2
July.....	1.4	2.7	2.5	1.9	1.6	1.8	2.9	2.9	2.7	2.4	2.1
August.....	1.4	2.7	2.3	1.7	1.8	1.7	2.8	22.4	2.6	2.2	2.1
September.....	1.4	2.7	2.1	1.8	1.7	1.5	2.7	15.7	2.6	2.1	2.0
October.....	1.6	2.9	2.0	1.6	1.5	1.7	2.8	10.9	2.5	.....	2.0
November.....	1.7	3.2	2.0	1.6	1.7	1.8	3.1	8.2	2.5	.....	2.2
December.....	2.7	4.4	2.6	2.1	2.4	2.8	4.8	7.2	2.6	.....	3.1
Annual average.....	1.6	2.9	2.8	1.9	1.9	2.0	2.9	7.2	3.2	.....	2.3

Unemployment among members of trade-unions was highest in August, 1914 (22.4 per cent), the first month after the outbreak of the war. It decreased from month to month and by June, 1915, had reached a nearly normal stage and remained there with slight variations until March, 1916, when a further decrease set in. During August and September, 1916, the state of unemployment fell even below the normal average for the seven-year period 1907-1913.

#### TRADE-UNION STATISTICS FOR THE YEAR 1914.

The membership of trade-unions at the end of 1913 and 1914, the number of trade-union members called in for military service up to the end of 1914, and the receipts, disbursements, and assets of the various federations of trade-unions are shown in the following table:

##### MEMBERSHIP AND FINANCIAL STATISTICS OF GERMAN TRADE-UNIONS, 1914.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 131.]

Federation.	Membership at the end of—		Number of members called in for military service.	Total receipts, 1914.	Total disbursements, 1914.	Assets at the end of 1914.
	1913	1914				
Free (Social-Democratic) trade-unions <sup>1</sup>	2,525,042	1,502,811	751,230	\$16,905,891	\$18,970,895	\$19,386,935
Christian trade-unions.....	341,735	218,197	88,023	1,395,554	1,397,489	2,315,111
Hirsch-Duncker trade-unions.....	106,618	77,749	27,289	605,721	636,055	965,548
Independent societies.....	318,508	205,360	87,582	531,106	574,200	844,103
Nonmilitant societies.....	273,725	162,163	59,123	689,775	625,707	692,547
Total <sup>2</sup> .....	3,565,628	2,166,280	1,013,247	20,128,047	22,204,346	24,204,244
Sectarian workmen's societies.....	804,059	653,311	89,827	281,976	272,246	207,299
Grand total.....	(3)	(3)	(3)	20,410,023	22,476,592	24,411,543

<sup>1</sup> Inclusive of domestic servants and agricultural workers.

<sup>2</sup> Data for locally organized trade-unions could not be obtained, and are not included in the total.

<sup>3</sup> As a large number of members of sectarian workmen's societies are also members in trade-unions the grand total of the figures above shown would include many duplications.

At the end of 1914 the total membership of German trade-unions showed a decrease for the year of nearly 1,400,000 members. From the preceding table it is evident that this large decrease is chiefly due to the calling in of members for military service. The financial data presented in the same table show that in all federations of workmen's organizations, with the exception of the nonmilitant and sectarian societies, the disbursements for the year under review exceeded the receipts, a fact largely due to the large amounts disbursed by the organizations for unemployment benefits.



## COLLECTIVE AGREEMENTS.

The number of collective agreements newly concluded in Germany during 1914 and the number of agreements in force at the end of the same year, as well as the number of establishments and workers affected by them, are shown in the following table by industry groups:

## COLLECTIVE AGREEMENTS IN GERMANY, BY INDUSTRY GROUPS, 1914.

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 14.]

Industry group.	Collective agreements—					
	Newly concluded during 1914.			In force Dec. 31, 1914.		
	Number.	Establishments affected.	Workers affected.	Number.	Establishments affected.	Workers affected.
Agriculture, gardening, etc.....	10	208	717	77	518	3,490
Mining, etc.....	1	1	80	2	2	92
Stones and earths.....	213	1,194	23,529	601	3,629	60,166
Metal working, machinery, etc.....	183	2,919	16,738	1,285	16,225	147,503
Chemical industries.....	17	20	3,127	68	74	7,154
Forest products.....	11	13	1,236	61	70	3,933
Textiles.....	12	42	2,518	185	453	10,847
Paper.....	29	446	5,178	176	2,278	38,844
Leather.....	47	816	3,373	262	5,090	32,254
Woodworking.....	204	1,984	14,950	1,287	18,322	163,597
Foodstuffs, beverages, etc.....	346	963	20,890	2,270	11,431	108,237
Clothing.....	196	7,415	33,979	746	19,831	142,917
Cleaning.....	32	574	1,314	133	2,323	5,940
Building trades.....	580	7,232	103,675	1,997	43,622	474,824
Printing trades.....	5	205	3,819	93	10,298	88,448
Commerce.....	199	546	11,976	849	2,757	45,165
Transportation.....	69	1,096	10,460	370	4,665	53,919
Hotels, restaurants, etc.....	125	336	973	339	1,952	7,600
Musical, theatrical, etc., enterprises.....	10	15	196	28	94	559
Miscellaneous.....				11	16	234
Total.....	2,289	26,025	258,728	10,840	143,650	1,395,723

According to the above table, collective agreements were most numerous in the foodstuffs industries. The building trades, however, take first place if the number of establishments and workers affected is considered. Of the total number of agreements in force at the end of 1914, 6,066 (55.9 per cent), affecting 122,583 (85.3 per cent) establishments and 1,173,032 (84 per cent) workers, contained provisions for the mediation or arbitration of all labor disputes. The hiring of help through specified employment bureaus was stipulated in 19.6 per cent of all agreements, affecting 26.1 per cent of all establishments and 18.9 per cent of all workers covered by agreements.

The minimum wages for skilled and unskilled adult male workers stipulated by agreements providing for time wages, and the number

and per cent of establishments and workers covered by specified wage classes, are shown below:

**MINIMUM HOURLY RATES OF WAGES FOR SKILLED AND UNSKILLED ADULT MALE WORKERS STIPULATED IN COLLECTIVE AGREEMENTS IN FORCE DEC. 31, 1914.**

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 18.]

Minimum hourly rate of wages.	Collective agreements.		Establishments affected.		Workers affected.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<b>Skilled workers:</b>						
6 cents or less.....	3	0.1	7	0.0	43	0.0
Over 6 to 8.3 cents.....	229	4.3	2,088	2.0	27,763	2.9
Over 8.3 to 10.7 cents.....	1,436	26.6	15,103	14.2	142,553	15.1
Over 10.7 to 13.1 cents.....	2,075	38.5	39,165	36.9	366,446	38.7
Over 13.1 to 15.5 cents.....	1,086	20.1	30,124	28.4	267,068	28.2
Over 15.5 to 17.8 cents.....	431	8.0	14,255	13.5	93,954	9.9
Over 17.8 cents.....	131	2.4	5,329	5.0	49,306	5.2
Total.....	5,391	100.0	106,071	100.0	947,133	100.0
<b>Unskilled workers:</b>						
6 cents or less.....	23	0.9	137	0.4	7,132	1.2
Over 6 to 8.3 cents.....	508	19.4	1,891	4.9	56,105	9.3
Over 8.3 to 10.7 cents.....	1,212	46.2	11,475	29.7	228,683	38.1
Over 10.7 to 13.1 cents.....	644	24.6	13,020	33.7	204,700	34.1
Over 13.1 to 15.5 cents.....	191	7.3	8,539	22.1	82,630	13.7
Over 15.5 to 17.8 cents.....	32	1.2	3,308	8.6	19,807	3.3
Over 17.8 cents.....	11	0.4	225	0.6	1,647	0.3
Total.....	2,621	100.0	38,595	100.0	600,704	100.0

The daily hours of labor stipulated in collective agreements are presented in the following table:

**DAILY HOURS OF LABOR DURING SUMMER AND WINTER STIPULATED IN COLLECTIVE AGREEMENTS IN FORCE DEC. 31, 1914.**

[Source: Statistisches Jahrbuch für das Deutsche Reich, 1916. Berlin, 1916, p. 22.]

Daily hours of labor.	Collective agreements.		Establishments affected.		Workers affected.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
<b>Summer:</b>						
Less than 8 hours.....	28	0.3	651	0.5	4,838	0.4
8 hours.....	262	2.8	2,567	1.9	38,420	3.1
Over 8 to 8½ hours.....	152	1.6	4,148	3.1	40,605	3.2
Over 8½ to 9 hours.....	1,581	16.9	48,546	36.7	388,544	31.0
Over 9 to 9½ hours.....	2,217	23.8	27,455	20.8	268,567	21.4
Over 9½ to 10 hours.....	4,001	42.8	38,546	29.2	468,373	37.3
Over 10 to 10½ hours.....	372	4.0	1,361	1.0	15,119	1.2
Over 10½ to 11 hours.....	347	3.7	3,665	2.8	14,229	1.1
Over 11 hours.....	384	4.1	5,321	4.0	16,160	1.3
Total.....	9,344	100.0	132,260	100.0	1,254,855	100.0
<b>Winter:</b>						
Less than 8 hours.....	1,020	12.0	33,920	27.0	381,458	32.3
8 hours.....	634	7.5	6,168	4.9	39,258	7.5
Over 8 to 8½ hours.....	157	1.8	3,863	3.1	37,486	3.2
Over 8½ to 9 hours.....	1,441	17.0	36,254	28.8	293,991	24.9
Over 9 to 9½ hours.....	1,933	22.8	15,429	12.3	157,957	13.4
Over 9½ to 10 hours.....	2,405	28.3	20,780	16.5	196,903	15.8
Over 10 to 10½ hours.....	270	3.2	971	.8	8,011	.7
Over 10½ to 11 hours.....	287	3.4	3,467	2.8	12,400	1.0
Over 11 hours.....	338	4.0	4,799	3.8	14,144	1.2
Total.....	8,485	100.0	125,651	100.0	1,181,608	100.0

## WAGES IN BERLIN.

The October, 1916, number of the Reichs-Arbeitsblatt (Bulletin of the Bureau of Labor Statistics of the Imperial Statistical Office) contains data as to current rates of wages in Berlin. These data were compiled by the Central Employment Bureau of Berlin for the fiscal year ended March 31, 1916, and are based on the wages received by persons placed in employment by the bureau. The table compiled by the bureau follows:

## WEEKLY RATE OF WAGES OF MALE WORKERS PLACED BY THE CENTRAL EMPLOYMENT BUREAU OF BERLIN DURING THE FISCAL YEAR ENDED MAR. 31, 1916.

[Source: Reichs-Arbeitsblatt, vol. 14, No. 10, p. 828. Berlin, 1916.]

Weekly rate of wages.	Juvenile workers.	Adult workers.	Porters.	Drivers.	Total:		Per cent of workers receiving the rate of wages specified.	
					1915-16	1914-15	1915-16	1914-15
Up to 11 marks (\$2.62).....	407				407	1,985	1	2
12 to 14 marks (\$2.86 to \$3.33).....	2,229				2,229	5,052	3	4
15 to 17 marks (\$3.57 to \$4.05).....	5,894				5,894	19,609	7	18
18 marks (\$4.28) and over.....	12,380				12,380		15	
Up to 19 marks (\$4.52).....	4				4	1,972		2
20 to 21 marks (\$4.76 to \$5).....	53		8		61	6,120		5
22 to 25 marks (\$5.24 to \$5.95).....	1,600	1,008	19		2,627	90,504	3	276
26 to 30 marks (\$6.19 to \$7.14).....	13,269	3,255	1,209		17,733		21	
Over 30 marks (\$7.14).....	34,757	1,651	2,814		39,222		47	
Monthly wages and sustenance equivalent to from 15 to 100 marks (\$3.57 to \$23.80).....	1,388	66	763	116	2,333	3,775	3	3
Total.....	22,298	49,749	6,685	4,158	82,890	119,017	100	100

<sup>1</sup> Inclusive of juvenile workers receiving over 17 marks (\$4.05) per week.

<sup>2</sup> Inclusive of workers receiving over 25 marks (\$5.95).

The wages of male juvenile workers, which during the fiscal year 1914-15 varied between 11 and 17 marks (\$2.62 to \$4.05) and were much higher than the wages during peace times for the same class of workers, increased during the fiscal year 1915-16 to 18 marks (\$4.28) and over for 60 per cent of all the boys placed by the bureau. These high wages for juvenile labor led to an order by the military commander of the district condemning the reckless manner in which boys spent their wages and requesting parents and guardians to retain a certain percentage of these boys' earnings. The wages of adult workers also experienced a considerable increase. While, during 1914-15 their usual weekly wages varied between 22 and 25 marks (\$5.24 to \$5.95), they increased to between 26 and 30 marks (\$6.19 to \$7.14) during 1915-16, which increase partly offset the higher cost of living.

At the beginning of 1916 the Central Employment Bureau of Berlin made an investigation as to the current wages of skilled labor in



this city. The results of this investigation are shown in the following table:

## WAGES OF SKILLED WORKERS IN BERLIN, JANUARY, 1916.

[Source: Reichs-Arbeitsblatt, vol. 14, No. 10, p. 828. Berlin, 1916.]

Trade.	Hourly wages.	Weekly wages.	Piecework earnings (weekly).	Remarks.
Painters.....	\$0.178			From Mar. 6, 1916, a high cost of living bonus of 6 pfennigs (1.4 cents) per hour.
Tinsmiths.....	\$0.202 to .238			
Upholsterers.....	.214 to .238			In addition a high cost of living bonus of 10 pfennigs (2.4 cents) per hour.
Bookbinders, hand.....		\$8.57 to \$9.04	\$9.52 to \$19.04	
Bookbinders, machines.....		9.04 to 10.00		
Leather workers.....		7.62 to 11.90		In addition a war bonus of 5 marks (\$1.19) per week.
Plasterers.....		10.71 to 12.85		
Roofers.....	.214 to .238			
Machinists.....		10.71 to 11.90		
Brewers.....		9.16 to 9.40		In addition a high cost of living bonus of 15 marks (\$3.57) per month.
Bakers.....		8.57 to 9.52		
Cabinetmakers.....		10.12 to 10.71		For week of 50 hours.
Printers.....		8.33 to 8.81		In addition a high cost of living bonus of 3 marks (71 cents) per week.
Pavers.....	.214 to .238			
Rammers (paving).....	.167 to .178			
Masons.....	.200			
Carpenters.....	.214 to .238			

All of the above-shown trades show considerable wage increases, as compared with the year preceding the war. In most instances, however, these increases do not offset the large increases in the cost of food, fuel, and clothing.

## GREAT BRITAIN.

The British Board of Trade Labor Gazette declares that in September "all the principal industries were well employed, while those engaged on Government contracts continued to work at high pressure." Although there was slackness in a few trades there was no appreciable number unemployed. When compared even with the prosperous conditions of a year ago, employment on the whole showed an improvement. "The substitution of women and girls for men continued, but the depletion of industry, owing to increased enlistments, necessitates their employment in much greater numbers if industrial requirements are to be met." Employment was reported good in such industries as coal, iron, and shale mining, quarries, pig-iron industry, iron and steel works, boot and shoe trade, the glass and pottery trades, woodworking trades, and other trades in general and in the building trade. The cotton trade continued to be affected by a shortage of labor, while the woolen and worsted trades

were active. The supply of sailors and firemen for merchant ships was not equal to the demand.

Compared with a month ago, there was no change in the trade-union unemployment percentage, but compared with a year ago there was a decrease of one-half of 1 per cent. The following table shows the per cent of trade-union members unemployed during 1914, 1915, and the first nine months of 1916:

PER CENT OF UNEMPLOYMENT IN TRADE-UNIONS DURING EACH MONTH, 1914, 1915, AND 1916.

Month.	1914	1915	1916	Month.	1914	1915	1916
January.....	2.6	1.9	0.6	July.....	2.8	0.9	0.4
February.....	2.3	1.6	.5	August.....	7.1	1.0	.4
March.....	2.2	1.3	.5	September.....	5.9	.9	.4
April.....	2.1	1.2	.5	October.....	4.4	.8	.....
May.....	2.3	1.2	.5	November.....	2.9	.6	.....
June.....	2.4	1.0	.5	December.....	2.5	.6	.....

Employment conditions in certain industries are reflected in the following table, which shows the number of employees of establishments reporting, and total amount of wages paid during a representative week in September, 1916, and the per cent of increase or decrease in numbers employed and wages paid over the corresponding week of August, 1916, and of September, 1915. These data, of course, relate to the same establishments in each period of time indicated; otherwise the comparison would be valueless.

NUMBER OF PERSONS EMPLOYED BY ESTABLISHMENTS REPORTING, AND WAGES PAID SUCH EMPLOYEES, FOR THE WEEK ENDING SEPT. 23, 1916, COMPARED WITH DATA FOR THE CORRESPONDING WEEK OF AUGUST, 1916, AND OF SEPTEMBER, 1915.

Industry.	Number of persons employed third week of September, 1916.	Per cent of increase or decrease as compared with corresponding week of—				Total amount of wages paid.	Per cent of increase or decrease as compared with corresponding week of—			
		August, 1916.		September, 1915.			August, 1916.		September, 1915.	
		Increase.	Decrease.	Increase.	Decrease.		Increase.	Decrease.	Increase.	Decrease.
Cotton.....	148,501	.....	0.6	.....	3.5	\$822,443	.....	2.2	3.6	.....
Woolen.....	20,408	.....	.6	.....	1.0	121,200	.....	.4	6.4	.....
Worsted.....	31,880	.....	.3	.....	2.1	163,028	3.2	.....	11.5	.....
Linen.....	37,225	0.6	1.0	.....	1.0	137,084	1.9	.....	13.7	.....
Jute.....	12,924	.....	1.1	.....	1.8	67,017	.....	2.4	.....	0.7
Hosiery.....	15,906	.....	.2	.....	.8	80,799	.....	1.0	6.3	.....
Lace.....	7,050	.8	.....	.....	1.8	39,750	2.1	.....	11.2	.....
Other textiles.....	15,984	.....	.5	.....	7.3	72,686	.3	.....	.6	.....
Bleaching, etc.....	24,391	.....	1.1	1.3	.....	201,040	.....	.8	16.2	.....
Boot and shoe.....	57,307	.1	.....	.....	2.6	376,463	1.1	.....	4.3	.....
Shirt and collar.....	17,041	.3	.....	.....	7.7	66,851	.7	.....	.....	.7
Clothing, ready-made.....	31,054	1.3	.....	.....	18.4	142,150	1.2	.....	.....	17.9
Printing and bookbinding.....	20,082	.....	.....	.....	10.2	129,391	1.3	.....	.....	3.9
Pottery.....	17,043	.....	.2	.....	3.1	96,342	.2	.....	6.3	.....
Glass.....	9,465	.....	.2	.....	2.7	77,854	.5	.....	10.5	.....
Brick.....	5,339	.....	1.9	.....	14.4	40,046	.....	1.3	.....	5.7
Cement.....	6,053	.....	.5	.....	11.2	53,502	.....	.1	.....	6.4
Food preparations.....	48,814	1.2	.....	.....	6.5	278,816	5.8	.....	6.4	.....
Total.....	526,467	.....	.1	.....	4.7	2,966,462	.3	.....	3.8	.....

**NETHERLANDS.**

Official statistics of unemployment in Holland brought down to the end of September, 1916, show continued reductions, in comparison with 1915 and the second half of 1914. The statistics cover the most important trades. The unemployed were 4.6 per cent of the total number of workers in September of 1916 against 10 and 27.2 per cent at the corresponding time in 1915 and 1914, respectively. The diamond cutting and polishing trade accounted for most of the unemployed in each of the three years. Excluding that trade, the unemployment at the end of September, 1914, was 15.4 per cent; of September, 1915, 4.7 per cent; of September, 1916, 2 per cent.

Of the trades listed only two (mining and agriculture) showed absolutely no unemployment in 1915 and 1916. The next lowest was the leather trade—two-tenths of 1 per cent in 1916. No trade reached 3 per cent in 1916 excepting those connected with transportation (17.4 per cent) and diamonds (38.3 per cent), both being adversely affected by the war.

**NORWAY.**

A recent number of the journal of the Norwegian Department of Labor thus summarizes the labor situation in that Kingdom:

At the public employment offices during May to July, 1916, both for men and women, there was an excess of vacancies reported as well as a shortage of labor. This excess of vacant places increased during the months in question very considerably from May to June, and again slightly in July. Trade-union data for the same months show for most of the trades practically no unemployment, this being especially true during June and July.

The strike which had previously prevailed in the iron and metal industries and in mining on account of the threat of a Government compulsory arbitration measure, which, however, finally became law (see MONTHLY REVIEW, September, 1916, pp. 78, 79), continued well into June and became considerably extended in scope. However, about the middle of June work was again resumed in most instances.

The percentage of unemployment among trade-unions in July was one-half of 1 per cent, being the same as for June preceding; in July, 1915, it was reported as nine-tenths of 1 per cent; and in June 1.9 per cent. The figures are based upon the membership in the following trade-unions: Metal trade, bookbinders (in Christiania), woodworkers, furniture makers, bakers (Christiania), boot and shoe workers, masons (Christiania), painters (Christiania), and printers. The percentages of unemployment have been based upon approximately 15,000 members in 1915 and about 17,000 members in 1916.



The proportion of male applicants at 16 employment exchanges to each 100 vacancies notified has gradually decreased during 1916 from 135 in January to 81 in July; it is considerably less than the proportion for each of these same months for the years 1914 and 1915 and the general average for the years 1909 to 1913. The situation as regards women applicants is in no wise different.

#### SWEDEN.

There is reported a continued shortage of labor in Sweden, according to the journal of the Swedish Labor Office, a shortage more acute in July than in the preceding month, and particularly pronounced in agriculture. For the second quarter of 1916, 662 employers, with 115,978 workmen, reported a shortage of labor; 1,557, employing 158,258 workmen, reported conditions as normal; and 75, employing 8,137 men, reported an excess of labor. On account of prevailing market conditions in fuel products, there has been an increase in the supply of labor in the peat-digging industry. An improvement is noted in the building trade, with an increasing building activity.

Data from 30 trade-unions, which reported a membership of 59,775 in June, 1916, showed 3.3 per cent unemployed during that month. Preliminary reports for July show an unemployment of 4.6 per cent, total membership not being reported. The unemployment in July, 1915, was 6.3 per cent; in 1914, 3.1 per cent; in 1913, 2.7 per cent; and in 1912, 3.3 per cent. In June, 1916, the largest amount of unemployment, or 70 per cent, was found in the plasterers' union; next in rank, with 19.9 per cent, was the transport workers' union; followed by stone workers, 16.6 per cent; road repairers and workers on canals and waterways, 8 per cent; unskilled workers, 6.6 per cent; woodworkers, 4.7 per cent; tin and sheet-metal workers and electrical workers, 4.5 per cent; and bakery and confectionery workers, 4.4 per cent.

By the employment offices in the principal industrial centers of the Kingdom there is reported a decrease in the number of applicants for each 100 vacant situations reported. The proportion decreased from 138 in January, 1916, to 82 in July, and in each of the first seven months of the year the proportion was very much less than for the corresponding months of the preceding year, and very much less than the average for the same months for the 11-year period, 1902-1912.

## WASHING FACILITIES AND BATHS FOR MUNITION WORKERS IN GREAT BRITAIN.

The health of munition workers committee, Great Britain, has recognized that cleanliness is beneficial not only to the health and personal efficiency of workers engaged on processes in which poisonous materials are manipulated or where heat, dust, or dirt are present to an unusual degree, as advocated in its memorandum No. 8 on "Special industrial diseases,"<sup>1</sup> but that it also bears an important relation to good health and working efficiency of all workers. In its memorandum No. 14, entitled "Washing facilities and baths,"<sup>2</sup> the committee takes occasion to emphasize this fact and to urge the importance of providing opportunities for washing, so that workers may leave their employment clean and tidy. Evidence before the committee seems to have clearly established the desire of many operatives, especially those engaged in heavy engineering processes, for improved lavatory and washing accommodations. The committee found that where washing facilities have been provided sufficient attention is seldom paid to the details of construction, with the result that lavatories quickly fall into disrepair. This can be avoided, it is believed, if the installation is made to conform to the following requirements: Simple in construction and arrangement; strong and durable; sufficient and suitable in accommodation, so that a large number can wash together or in a short time; economical in space; so constructed that it can be easily cleaned; provided with ample supply of cold and hot water; so situated in the factory as to be fairly available for all for whom it is provided. Nail brushes secured by chains, so that they can not be removed, should be provided; soap, preferably in liquid or powdered form, should be placed in small boxes above the washing trough; and clean, dry towels, renewed or washed daily, should be supplied to each worker, though it is suggested that a roller towel may be provided for every three workers, but should be renewed or washed daily, or provided for every nine workers if it is renewed or washed after each meal and at the close of the day's work.

In addition to ordinary washing accommodations the committee suggests the desirability of providing bathing facilities in many industries, especially those in which workers are exposed to great heat and excessive dust, or are brought into contact with poisonous material. For men a shower or douche bath is recommended as being sim-

<sup>1</sup>A brief digest of this memorandum will be found in the Monthly Review for June, 1916, pp. 83-88.

<sup>2</sup>Great Britain. Health of Munition Workers' Committee. Memorandum No. 14, Washing Facilities and Baths. London, August, 1916. 8 pp.

ple and inexpensive; for women a horizontal spray at the level of the shoulders is suggested. The number of these baths should be sufficient to enable workers to have a bath at any time without appreciable delay; privacy should be insured; construction should be so carried out as to facilitate the maintenance of absolute cleanliness; pure water at a temperature of about 100° F. should be used; soap in the form of a tablet sufficient for one bath should be provided; where necessary there should be provision for drying the clothes of workers.

The committee emphasizes the importance of care in the maintenance of these baths and lavatories, and suggests that this should be made the definite duty of an appointed officer acting under the welfare supervisor, "who should keep the lavatory clean, control the supply of nail brushes and soap, and arrange that dry, clean towels are available."

While the ultimate responsibility for upkeep must rest with the employer it may be found, at any rate in the case of baths, that the workers may with advantage be encouraged to participate in the management by special committee or otherwise. The question of the payment to be made for baths will also need careful consideration; in some cases at any rate the workers may prefer to make some small payment. Where periodic baths are of special benefit to health and efficiency, it is found desirable to allow workers time for bathing within working hours.

#### EIGHT-HOUR LAW IN ECUADOR.

ARTICLE 1. No laborer, mechanic, employee in any commercial establishment, office, industrial enterprise, and, in general, no employee whatever may be the nature of his services, shall be compelled to labor more than 8 hours daily, six days per week, nor shall he be required to perform any labor on Sundays or legal holidays.

ARTICLE 2. No contract or stipulation entered into for the purpose of evading the provisions of Article 1 shall be of any force or effect.

ARTICLE 3. If upon request any laborer, mechanic, clerk, etc., shall perform labor in excess of the hours as provided for in Article 1, he shall be paid for such excess worked during the day wages increased by 20 per cent of the regular wages; increased by 50 per cent for hours worked between 6 o'clock p. m. and 12 o'clock midnight, and 100 per cent after the last-named hour.

These increases shall be based upon one-eighth of the daily wages, and shall be paid for each hour worked in excess of the 8 hours provided by this act.

ARTICLE 4. The provisions of Article 3 shall apply to persons working by shifts, only to the extent to which their labor is prolonged beyond the 8-hour shift, in which case they shall be paid the increased wages for each hour of overtime as herein provided.



ARTICLE 5. No employer shall discharge an employee, nor shall an employee quit the service of an employer, without having given 30 days' notice of his intention so to do. Any employer who discharged an employee, or any employee leaving the service of an employer, without having given the notice herein required shall be liable to the other in a suit for damages.

ARTICLE 6. Judges of the police court and parish justices of the peace shall be competent to hear and determine such suits. The courts shall render their decisions summarily and without delay and without appeal except as to matter of fact.

September 4, 1916.

Approved September 11, 1916.

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#### PROPOSED CREATION OF PUBLIC STATE SUBSIDIZED EMPLOYMENT OFFICES IN ITALY.<sup>1</sup>

The Italian superior labor council, an advisory body on labor problems to the ministry of industry, commerce, and labor, has for some time had under consideration a scheme to organize the employment bureaus of the Kingdom under State supervision. At its twenty-second session (April, 1915) the council after protracted discussion finally approved a set of principles and recommended adherence to these in the proposed enactment of a law regulating public and private employment bureaus. Briefly outlined these principles are the following:

A public employment office is defined to be any employment office directly operated by the State as well as employment offices operated by Provinces or communes under authorization from the minister of industry, commerce, and labor after approval by the latter of their regulations. It is proposed that employment bureaus founded by charitable or public-welfare institutions or by mutual agreement of employers' and workmen's organizations shall enjoy the same rights as public employment bureaus.

The labor council recommends that the ministry leave a free hand to provincial and communal employment bureaus in the formulation of their regulations and should merely see to it that these regulations do not run counter to the fundamental principles of the proposed law. Authorization of the creation of provincial and communal employment bureaus should always be granted by the ministry provided that a State bureau does not exist in the locality or that

<sup>1</sup> Atti del consiglio superiore del lavoro, XXII sessione, Aprile 1915, Rome, 1915. (Pubblicazione dell' Ufficio del Lavoro, Serie A, No. 22.)

open hostility against the creation of a provincial or communal bureau is not manifested by the principal local employers' and workmen's organizations.

With respect to employment bureaus maintained by charitable or public-welfare organizations, the labor council recommends that these should as a rule not be recognized as public bureaus in localities in which a State, provincial, or communal bureau exists unless the former are coordinated in their functions to the latter or occupy themselves with the procuring of employment in special occupations not considered by the State, provincial, or communal bureau. In the case of bureaus created by employers' and workmen's organizations by mutual agreement it is evident that such bureaus will concern themselves exclusively with the procuring of employment in a given industry or occupation. The labor council recommends, therefore, that such bureaus be recognized as public bureaus after it has been ascertained that the organizations which are parties to the agreement represent the majority of employers and workmen in the industry or occupation in question.

The decree recognizing an employment bureau as a public bureau should always define the bureau's sphere of activity as to territory, industries, and occupations. If a State, provincial, or communal bureau and bureaus of charitable, public welfare, or workmen's and employers' organizations exist in the same locality they should co-operate in such a manner that general employment bureaus turn over to bureaus for special industries or occupations those demands for help and applications for work which relate to these industries or occupations.

To finance the above system of public employment bureaus the labor council recommends that a sum sufficient for the maintenance of State bureaus and the subsidizing of other public bureaus be provided for in the budget of the ministry of commerce, industry, and labor. The subsidies are to be distributed according to the importance of the bureaus as to the extent of their activities. Higher subsidies are to be granted to bureaus which aid unemployed applicants by the grant of loans for traveling expenses or in other ways. The labor council further recommends that all public employment bureaus be granted the franking privilege, free use of the telegraph and telephone service, and reduced railroad fares for applicants placed in localities other than their place of residence.

For the supervision and management of the individual public employment bureaus, the labor council recommends adherence to the equi-partisan principle. It proposes that for each public bureau a committee composed of an equal number of representatives of em-

ployers and employees be charged with the supervision of the bureau's affairs, and that the president of this committee be appointed in accordance with the provisions of the by-laws of the individual bureaus relating to such appointment. The duties of the committee are to be the following: General supervision of the management of the bureau; to report to the parties which founded the bureau all inconveniences manifesting themselves in the conduct of the bureau; to decide on the attitude of the bureau toward strikes or lockouts; to maintain reciprocal relations with other public employment bureaus; to attempt mediation in the case of collective labor disputes; to compile, in cooperation with interested organizations, general protective or contractual rules for special occupations; and to perform all other duties provided for the committee by the individual by-laws.

The labor council recommends that public employment offices should render their services gratuitously. An exception should only be made in the case of public offices established by mutual agreement of employers' and workmen's organizations, which might be permitted to charge moderate fees for their services, a schedule of these fees to be submitted to and approved by the permanent labor council and the ministry of commerce, industry, and labor, and to be posted subsequently in the office of the bureau.

With respect to labor contracts, the labor council takes the position that the employment bureaus should assume no responsibility as to their contents or as to their observance. The council recommends, however, that if a copy of a collective agreement is deposited with an employment bureau the procuring of employment for the industries or occupations considered in the agreement should take place on the basis of the conditions stipulated in the agreement.

In the case of collective labor disputes the council proposes that the services of the public employment bureaus should be suspended for the industries or occupations implicated in a dispute until the dispute has been settled. If the dispute has been settled by a court decision, or by arbitration, or has been conciliated through the intervention of public authorities, the employment bureau shall resume its functions in favor of that party which conforms to the decision of the court or of the arbitrators or to the agreement arrived at by conciliation.

Finally, the labor council recommends that the proposed law should provide for the cooperation of prefects, mayors, and local public authorities in general, with the public employment bureaus in so far as such cooperation would promote the scope of these bureaus.

With respect to localities in which a public employment bureau does not exist, it is recommended that employers' and workmen's



organizations be given full liberty in establishing employment bureaus, and that bureaus of employers' organizations which are recognized by the corresponding workmen's organizations, and vice versa, be granted all the financial benefits provided in the proposed law.

For the operation of private employment bureaus for pecuniary gain the labor council recommends a number of very stringent measures, such as have been enacted by several European countries with advanced labor legislation. Heavy fines are proposed for employees of public as well as of private employment bureaus who accept or exact fees or remunerations in excess of those stipulated in the approved schedules.

### IMMIGRATION IN OCTOBER, 1916.

The number of immigrant aliens admitted into the United States during the first 11 months of 1916 has been in excess of the number admitted during the corresponding months of 1915. There has also been an increase from month to month during 8 of the 11 months. The figures for the month of November show a decrease of 7.1 per cent. These facts are brought out in the statement following:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS, 1913, 1914, 1915, AND 1916.

Month.	1913	1914	1915	1916	
				Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	8.5
February.....	59,156	46,873	13,873	24,740	43.1
March.....	96,958	92,621	19,263	27,586	11.5
April.....	136,371	119,885	24,532	30,560	10.8
May.....	137,202	107,796	26,069	31,021	15.1
June.....	176,261	71,728	22,598	30,764	1.8
July.....	138,244	60,377	21,504	25,035	<sup>1</sup> 18.6
August.....	126,180	37,706	21,949	29,975	19.7
September.....	136,247	29,143	24,513	36,398	21.4
October.....	134,140	30,416	25,450	37,056	1.8
November.....	104,671	26,298	24,545	34,437	<sup>1</sup> 7.1

<sup>1</sup> Decrease.

Classified by races, the number of immigrant aliens admitted into and emigrant aliens departing from the United States during October, 1915 and 1916, was as follows:

IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM  
THE UNITED STATES, OCTOBER, 1915 AND 1916.

Race.	Admitted.		Departed.	
	October, 1915.	October, 1916.	October, 1915.	October, 1916.
African (black).....	491	840	81	97
Armenian.....	55	125	85	1
Bohemian and Moravian.....	27	37	2	6
Bulgarian, Serbian, Montenegrin.....	528	156	23	21
Chinese.....	311	233	106	227
Croatian and Slavonian.....	66	29	8	1
Cuban.....	340	316	69	319
Dalmatian, Bosnian, and Herzegovinian.....	27	6	.....	4
Dutch and Flemish.....	332	618	92	62
East Indian.....	17	9	9	12
English.....	3,606	3,796	670	764
Finnish.....	369	688	52	126
French.....	1,849	3,695	170	199
German.....	823	1,054	103	45
Greek.....	2,219	4,624	703	289
Hebrew.....	1,130	1,705	27	8
Irish.....	2,841	3,216	150	248
Italian (north).....	484	402	225	649
Italian (south).....	1,958	3,383	9,017	1,030
Japanese.....	737	694	80	85
Korean.....	7	32	1	11
Lithuanian.....	36	45	4	1
Magyar.....	60	50	52	14
Mexican.....	1,032	2,253	57	77
Pacific Islander.....	.....	.....	.....	.....
Polish.....	199	330	22	2
Portuguese.....	1,029	1,368	126	33
Roumanian.....	47	61	14	4
Russian.....	308	365	393	467
Ruthenian (Russniak).....	98	106	.....	2
Scandinavian.....	1,832	2,876	269	433
Scotch.....	1,284	1,662	132	201
Slovak.....	24	37	7	.....
Spanish.....	545	1,232	157	729
Spanish-American.....	197	248	43	50
Syrian.....	43	88	5	9
Turkish.....	7	93	1	.....
Welsh.....	115	86	23	12
West Indian (except Cuban).....	82	120	69	66
Other peoples.....	295	378	101	32
Not specified.....	.....	.....	676	817
Total.....	25,450	37,056	13,887	7,153

OFFICIAL PUBLICATIONS RELATING TO LABOR.

UNITED STATES.

CALIFORNIA.—*Industrial Accident Commission. Tentative electrical utilization safety orders, prepared by a committee representing various interests related to the manufacture, installation, and operation of electrical equipment. San Francisco, 1916. 40 pp.*

By sections 50 to 72 of the California workmen's compensation, insurance, and safety act, the industrial accident commission is empowered to make and enforce safety orders, rules, and regulations, and to prescribe safety devices and fix safety standards. It is given further power to appoint without compensation advisors to assist the commission in establishing standards of safety. This

report embodies the recommendations of a committee of advisors appointed to consider the electrical industry, and is published for the purpose of securing criticisms or suggestions of employers, employees, and others interested. It includes definitions of special terms and about 70 tentative orders relating to the various forms of electrical equipment and protective arrangements to be used in connection therewith.

COLORADO.—*Third Annual Report of the State Inspector of Coal Mines.* Denver, 1916. 82 pp.

Summary of coal production of Colorado for the year ending December 31, 1915. The number of fatal accidents per 1,000 persons employed has decreased, while the tonnage per fatal accident has increased, but the reverse is shown for nonfatal accidents.

Detailed tables show the number of employees, persons killed and injured, and production in the mines operated by each company in the State; fatal accidents, with cause of each; State coal-mine directory.

The following items are taken from the summary given:

Number of mines in operation, 1915.....	199
Number of tons of coal produced.....	8, 715, 397
Average number of days worked for all producing mines.....	166
Number of men employed as miners.....	7, 174
Total number of men employed in and about the mines.....	12, 563
Annual production of each miner (average) .....	1, 215
Total number of tons of coke produced.....	671, 454
Total number of coke ovens in operation.....	1, 724
Total number of men employed at coke ovens.....	532
Number of men killed underground.....	61
Number of men killed on surface.....	3
Number of men injured.....	712
Number killed per 1,000 employed.....	5. 1
Number injured per 1,000 employed.....	56. 7
Number of tons produced for each life lost.....	136, 178
Number of tons produced for each nonfatal accident.....	12, 241

DENVER (CITY AND COUNTY).—*Second annual report of the social welfare department for the year ending December 31, 1914.* [Denver.] 134 pp.

A report of health division, with vital statistics for 1914; commission of charities and corrections, which has supervision of the county farm, detention home and school, municipal lodging house, mothers' compensation, maintenance of girls committed to industrial school or the home, as well as other charitable and corrective divisions.

DISTRICT OF COLUMBIA.—*Text of the annual report of the superintendent of insurance. Business of 1915.* Washington, 1916. 58 pp.

Contains the usual detailed information found in a report on insurance business, and includes a short reference to social insurance in which it is pointed out that the hand-working wage earners of this country realize fully the results of accidents, invalidity, sickness, unemployment, and old age, and are, through their unions, through voluntary associations, through sickness and accident and industrial insurance, attempting to provide against these evils. "A study of this attempt in the District shows that those receiving as a rule the smallest wages pay annually for sickness and accident insurance about \$500,000 in premiums. The records show that they have never received benefits much in excess of \$200,000. The inadequacy of any system of insurance which requires 60 per cent for expense of conducting the business is apparent."



**ILLINOIS.**—*Industrial board. Rules governing the sittings of the board for the purpose of hearing and reviewing causes and general rules of the industrial board. Revised January 20, 1916. 13 pp.*

— *Second annual report of the miners' examining board. Year ending February 28, 1916. Springfield, Ill., 1915. 52 pp.*

— *Third annual report of the miners' examining board. Year ending February 29, 1915. Springfield, Ill., 1916. 44 pp.*

These reports cover the operation of the board for the years shown in the title, the number of examinations held and the number of persons to whom certificates as practical coal miners were issued, the number who failed to pass the required examination, and cause of failure, and the receipts of the board.

**INDIANA.**—*Industrial board. Department of mines and mining. Annual reports for the two years ending September 30, 1915. Fort Wayne, 1916. 258 pp.*

This report records for 1914 and 1915 a total coal production of 31,982,099 tons. Wages amounting to \$13,420,071.68 were paid to 22,110 men in 1914, and \$15,067,984.67 was paid to 20,702 men in 1915. In the two years there was a total of 2,439 accidents, of which 103 were fatal. The number of tons produced per fatality in 1914 was 339,493, and in 1915, 284,202. The number of employees killed per 1,000 employed was 2.21 in 1914 and 2.60 in 1915.

**LOS ANGELES.**—*Third Annual Report of the Public Employment Bureaus of Los Angeles District. Fiscal year ending June 30, 1916. Los Angeles, [1916] 39 pp.*

These employment bureaus are operated jointly by the State of California and the city of Los Angeles under the direction of the State Bureau of Labor Statistics and the Municipal Charities Commission of Los Angeles. During the year covered by the report 27,622 applicants were registered; 54,199 were sent out to positions; 51,710 orders for help were received, and 47,259, or 91.3 per cent, of these orders were filled. The average orders filled per day was 154.4. More than one-half (59.4 per cent) of the applicants registered were single persons, and 55 per cent were 30 years of age and under. Approximately one-half (52.2 per cent) had others dependent upon them. The total cost of operating these bureaus was \$18,713.64, or a cost of 39.5 cents for each position filled. This is a reduction of 21.3 per cent over the previous year.

**MASSACHUSETTS.**—*Bureau of Statistics. Twenty-ninth annual report on the statistics of manufactures for the year 1914. Boston, 1916. liii, 114 pp.*

Contains an introductory summary comparing the statistics of 1914 with those of previous years. The usual detailed tables are given showing capital invested, materials used, wages paid, product, and number of wage earners for the State and for the principal cities and towns; character of ownership for selected industries and for all industries; number of wage earners employed on the 15th of each month, by industries; classified weekly wages, by industries; average number of days establishments were in operation, by industries and by cities and towns; power used in manufactures, 1899 to 1914; statistics of steam laundries. There was a decline in value of product, stock and material used, wages paid, and number of wage earners in 1914 as compared with 1913.

— *Labor legislation in Massachusetts, 1916. Bureau of statistics. Labor Bulletin No. 116 (supplementary to Labor Bulletins Nos. 104 and 110). Boston, 1916. 83 pp.*

In addition to the acts relative to labor passed during the legislative session of 1916 the following titles appear: Index to bills affecting labor introduced during the session; opinion of the attorney general on pending legislation; recommendations concerning labor in the inaugural address of the governor; table showing disposition of statutes cited; and an index to labor legislation of 1916.

MASSACHUSETTS.—*State Board of Labor and Industries. Third annual report, January, 1916. Public Document No. 104. Boston, 1916. 140 pp.*

The Massachusetts State Board of Labor and Industries, in concluding its report for the year 1915, emphasizes the need for a larger inspection force, and asks for 36 inspectors, instead of 24, to cover adequately the industrial establishments in the State, estimated to number about 50,000. Of the 7,096 orders issued by the department affecting hours of labor, Sunday employment, school certificates, etc., nearly 6,500 (approximately 91 per cent) directly affected the conditions under which women and children work. For some years the law has provided for the inspection and licensing of places in which clothing is manufactured, and the board believes that there are other industries carried on in the home which should receive the same attention, particularly those relating to the manufacture of food and articles which are to be used in connection with food. Boys are forbidden to work in public bowling alleys, but are permitted to work in private bowling alleys, and the board, seeing in this much detriment to school work on account of late hours, asks the legislature to strike out the word "public," so as to prevent the employment of boys under 16 years of age in all bowling alleys. The employment of boys and girls as ushers or attendants in theaters and motion-picture houses, for the same reason, is discouraged, and the legislature is asked to prohibit such employment. The board believes that the law requiring payment of wages every week should apply to hotels as well as other establishments, and recommends the enactment of such an amendment. Delay in the payment of the wages due an employee on many occasions, it is stated, extends over the 30 days allowed by law for making complaint, and, since it seems that some employers take advantage of this delay to defeat the purpose of the law, the board asks for an extension to three months of the time in which complaint may be made. The need for uniformity regarding suitable receptacles for expectoration in factories and workshops is noted.

The report includes the report of the commissioner of labor, who calls attention to the fact that with the inspection of 31,843 establishments, with 10,597 reinspections and the issuance of 14,003 orders, only 340 prosecutions were instituted, of which 329 resulted in a verdict of guilty, 198, or 60.2 per cent, being convicted of nonpayment of wages.<sup>1</sup> Of the 14,003 orders issued, 7,096 (50.7 per cent) affected hours of labor, Sunday employment, etc.; 6,049 (43.2 per cent) affected industrial health, including toilet and washing facilities, medical and surgical chests, etc.; and 858 (6.1 per cent) affected industrial safety—that is, the guarding of dangerous machinery, etc.

Through the industrial development division, which was organized in September, 1914, for the purpose of studying conditions and promoting the industrial development of Massachusetts, 1,111 "trade opportunities," 606 domestic and 505 foreign, were sent out to 17,198 concerns.

The department's activities affecting industrial hygiene are set forth in a brief section devoted to health of minors, ventilation, gas poisoning, munition-gas poisoning, humidification, lighting, drinking water, medical chests and rooms for injured or sick employees, and occupational diseases. In considering the enforcement of the statute concerning adequate ventilation in factories, the report notes particularly the problem of dust, gas, and fume removal, and describes briefly several occupations in which danger from dust is encountered, including talc manufacture, granite cutting and lettering, pattern making, and

<sup>1</sup> It is noted, however, that there were 896 cases of nonpayment of wages, 698 being adjusted out of court.

brass making. Some causes of gas poisoning are mentioned, and where such cases occurred the management was given the following instructions:

1. That protection should be afforded to employees, so that the various compounds handled are not touched by the bare hand or allowed to touch the clothes.
2. That the footwear is such that poisons do not reach the skin of the feet.
3. Opportunities for thoroughly washing the hands before eating.
4. Opportunities for changing the clothes before beginning work and at the end of work.
5. Opportunities for eating luncheon in some room other than the workroom.
6. A tank of oxygen to be kept on the premises for immediate treatment of acute cases.
7. Thorough ventilation of the workroom and adequate exhaust system for removing fumes and gases.
8. Medical supervision of all employees, including a physical examination before employment and at stated periods during employment.
9. Suitable helmets for rescue work and for cleaning retorts.

One hundred and thirteen cases of occupational disease are tabulated, as follows: Lead poisoning (2 deaths), 67; gas poisoning (2 deaths), 14; caisson disease, 15; anthrax, 3; cigar neurosis, 3; dermatitis, 6; miscellaneous, 5.

The report includes seven appendixes. One of these gives an analysis of industrial diseases reported to the board for the year 1915, showing sex, age, diagnosis, occupation, kind of establishment, nature of work, length of employment, and symptoms, with a brief account of each disease and a history of specific cases of lead poisoning. In order to minimize the danger from lead poisoning the department endeavored to have the following rules and regulations adopted in every establishment where lead is used:

1. Proper heating, lighting, humidity, and ventilation of workshops.
2. Proper appliances for the removal of dust, gases, and fumes incidental to the industry.
3. Hot and cold water, soap and nail brushes, for washing purposes, and drinking water not exposed to lead contaminations.
4. Lunch rooms, lockers, and toilet rooms outside of the workroom.
5. Strict prohibition against luncheon eating and against dry sweeping in workroom.
6. Immediate notification by foreman, forewoman or master workman of every case of illness among the workers, especially pains in the stomach, continued headache, dizziness, weakness in arms, legs, and body.
7. Gloves or respirators to be provided in white lead dry scraping, grinding or mixing, as well as in the handling of white lead mixtures.
8. Request foreman, forewoman, or master workman to see that these instructions are given to all new workers, to all illiterates, and to those who do not understand the English language.

Another appendix embraces a report on the examination of minors to determine their physical fitness to enter occupations, an examination made by Dr. M. Victor Safford, of the United States Public Health Service, in cooperation with the Massachusetts child labor committee and the board of labor and industries.<sup>1</sup>

During the year ending November 30, 1915, the board expended a total of \$97,711.45, the largest single item being \$39,193.54 for salaries of inspectors and investigators (not including traveling expenses) or a cost of about \$1.23 for each inspection. It is estimated that \$138,674 will be needed to meet the expenses for the year ending November 30, 1916, the increase being due mainly to the salaries of 12 additional inspectors (\$18,000) which the legislature is asked to provide.

<sup>1</sup> The result of this examination is included in a pamphlet entitled "Influence of occupation on health during adolescence," a digest of which appeared in the MONTHLY REVIEW for November, 1916, p. 110.



MASSACHUSETTS.—*The Minimum Wage Commission. Statement and decree concerning the wages of women in women's clothing factories in Massachusetts (cloak, suit, skirt, dress, and waist shops). [Boston, 1916.] 10 pp.*

Gives the report and the reasons therefor made to the commission by the women's clothing wage board, as a result of which the commission decreed that "no experienced female employee of ordinary ability" shall be paid less than \$8.75 per week; that "no female employee of ordinary ability who has reached the age of 18 years shall be employed at a rate of wages less than \$7 a week"; and that "no other female employee of ordinary ability shall be paid at a rate of wages less than \$6 a week." The decree is effective on February 1, 1917.

— *Third Annual Report of the State Board of Labor and Industries. Public Document No. 104. Boston, 1916. 140 pp.*

A report of the conditions found in the factories and recommendations for legislative action. A large portion of the report is devoted to industrial hygiene and a report of Dr. M. Victor Safford, assistant surgeon, United States Public Health Service, on examination of minors, "with a view to standardizing methods of oversight of such persons to protect their health in the industries."

MICHIGAN (DICKINSON COUNTY).—*Third Annual Report of the Inspector of Mines, September 30, 1915, to September 30, 1916. 31 pp.*

Number and description of accidents occurring in the mines in Dickinson County for the fiscal year ending September 30, 1916, amount of ore mined, and number of persons engaged in mining.

A summary of the report is as follows:

Number of operating mines.....	17
Number of persons employed underground.....	1, 617
Number of persons employed on surface.....	759
Total number of persons employed.....	2, 376
Number of fatal accidents.....	8
Number of fatal accidents per 1,000 men employed.....	3. 37
Number of gross tons of ore mined.....	1, 545, 721
Number of gross tons of ore mined per fatal accident.....	193, 215

NEW JERSEY.—*Report of the Department of Labor, 1915, Camden, 1916. 80 pp. Illustrated.*

A review of this report will be printed in a future number of the MONTHLY REVIEW.

NEW YORK.—*Department of Labor. Industrial Commission. Safety committees. Albany, 1916. 7 pp.*

A pamphlet containing some suggestions that may be helpful to shop committees on safety; functions, selection of members, and duties of workmen's committees.

— *First report of the Committee on Civil Service of the Senate of the State of New York, appointed to investigate the civil service of the State, with particular reference to salaries, grades, and duties of officers and employees. Transmitted to the legislature March 27, 1916. Albany, 1916. 933 pp.*

A review of this report appears on page 45 of this number of the MONTHLY REVIEW.

OHIO.—*Industrial Commission. Bulletin Vol. III, No. 6. Department of Investigation and Statistics, Report No. 25. Statistics of Mines and Quarries in Ohio, 1915. Columbus, 1916. 99 pp.*

A digest of this report will appear in a future number of the MONTHLY REVIEW.

PENNSYLVANIA.—*Department of Labor and Industry. Monthly Bulletin. October, 1916. Harrisburg, 1916. 114 pp. Illustrated.*

Opens with a review of the activities of the industrial board during the 18 months from January 1, 1915, to July 1, 1916. It contains, among other articles, chapters on workmen's compensation as a scientific distribution of cost of industrial accidents; keeping the shop in a safe and efficient condition; how William Sellers & Co. (Inc.), of Philadelphia, virtually eliminated burns on the feet and legs of the employees in their foundry by instituting a general safety campaign; preventable accidents; accounting system of the department of labor and industry; and a section giving the rules and rulings of the workmen's compensation board. The work of the bureau of inspection is briefly reviewed, and the August record of the bureau of employment is given, showing 1,508 unemployed persons placed in positions. Tables are presented showing 188,278 workers injured during the first 9 months of 1916; 1,827 of these died from their injuries.

PHILIPPINE ISLANDS.—*Report of the Philippine Commission, 1915 (Annual Reports, War Department). Washington, 1916. 318 pp.*

The report is the sixteenth annual report, and covers the fiscal year ending December 31, 1915. The report states that "the legislation of this year has been characterized by the constant realization of the economic needs of the country."

Act No. 2589 provides for civil-service retirement for regularly and permanently appointed officers and employees in the Philippine civil service after six continuous years of service. An appropriation of ₱200,000 (\$100,000) was made for the purpose of guaranteeing on behalf of the Government dividends or interest not to exceed 5 per cent on capital invested in new agricultural, commercial, or industrial enterprises. An act providing for the establishment of a bank with the majority control permanently vested in the Government resulted in the prompt organization of such an institution.

All the staff and employees in the bureau of labor are Filipinos. Their number was 38 on December 31, 1915, and the amount expended during the year for salaries was ₱42,726 (\$21,363). The subjects reported on by the bureau are: Employment agencies, seamen's employment agencies, emigration of Filipino laborers, complaints relative to wages, labor accidents, strikes, and expenditures.

The following summary relative to labor accidents is reproduced here:

Number of accidents.....	323
Number of victims.....	351
Number of deaths.....	56
Permanently disabled.....	12
Temporarily disabled.....	283
Number of victims indemnified.....	209
Number of victims not indemnified.....	100
Indemnity claims pending at close of the year.....	42
Total amount of indemnity paid (\$4,335).....	₱8, 670

The bureau intervened in 11 strikes during the year, all of which were for increase of wages. In 8 of these the employers granted the demands, and in 3 no settlement could be reached.

The total expense of the bureau was ₱57,293 (\$28,647).

WISCONSIN.—*Bulletin of the Wisconsin State Board of Industrial Education, No. 13. Conferences of teachers, Wisconsin public, industrial, commercial, continuation, and evening schools, Madison, 1916. 113 pp.*

Papers and discussions presented at eight conferences of teachers, held between December 4, 1915, and March 4, 1916, relative to industrial, commercial, continuation, and evening schools.

UNITED STATES.—*Congress. House. Committee on Labor. Woman's Division in Department of Labor. Report to accompany H. R. 16358. [Washington, 1916.] 6 pp. (64th Cong., 2d sess., H. Rept. No. 1205.)*

This report recommends that the bill to establish in the Department of Labor a division to be known as a woman's division be passed without amendment, and bases the necessity for such a division on the following three propositions: (1) The growing army of wage earners create problems in the industrial world of far-reaching importance to the public as a whole; (2) solutions of these problems can be effected only through the continuous and constructive studies which recognize not only the similarities but the essential differences in conditions surrounding wage-earning women and wage-earning men; and (3) the record of 25 years shows that without statutory existence the work of a division designed to ascertain the facts concerning women in industry can not be continuous and coherent because its resources have been uncertain, its activities intermittent, and its very existence a matter of chance.

— *Department of Agriculture. Office of Markets and Rural Organization. Marketing and distribution of western muskmelons in 1915. Washington, October 31, 1916. 38 pp. 5 charts.*

Gives results of an investigation of marketing conditions in certain melon-growing sections, by agents of the Department of Agriculture, in response to "complaints from growers in the United States with reference to glutted markets and ruinous returns to all engaged in the muskmelon industry."

— — *Office of Markets and Rural Organization. Results of a survey of State marketing activities throughout the United States. Washington, June 5, 1916. 7 pp.*

A summary, alphabetically arranged by States, of marketing activities throughout the United States, showing what States have established official marketing departments, the name of the agency charged with this work, and the nature and scope of the work being done.

— — *Office of Markets and Rural Organization. Survey of typical cooperative stores in the United States. Washington, November 3, 1916. 32 pp.*

The investigation reported in this pamphlet was undertaken with a view to obtaining "information regarding the feasibility of the cooperative store as a remedy for the great expense of distribution and the resulting high cost of living." It is estimated that there are about 400 such stores in the United States; the information in the report covers 60 stores. The investigation seemed to establish that these stores have apparently performed a real service, namely, the introduction of improved business methods in the towns where they have been established. "They have had the effect of stimulating competition," resulting "in lower prices to every consumer in the locality and frequently in better prices to farmers on produce."

— *Department of Commerce (Bureau of the Census). The Federal Registration Service of the United States: Its development, problems, and defects. Prepared for the Second Pan American Scientific Congress, Washington, December 27, 1915, to January 8, 1916, by Cressy L. Wilbur, M. D. Washington, 1916. 86 pp.*

A review of the history and development and an analysis of the present system of registration and return of the materials of vital statistics to the Bureau of the Census, and an account of the nature and development of the various State registration services which supply these materials, give cause for easy criticism of apparent defects as set forth in this report. "But it is not easy to point out, or rather to work out, the remedy" for existing defects, the report declares. The obvious imperfections listed are these: (1) Lack of



registration of deaths for the entire area of the United States; (2) imperfect registration of births within the area covered; (3) lack of complete registration within the registration area for deaths; (4) defective returns, especially in recently admitted States; (5) lack of concordance in the data desired by the Bureau of the Census and that furnished by the State and city registration offices; (6) lack of uniform practice in the inclusion or exclusion of the deaths of nonresidents in given area; (7) failure to compile other than crude or general death rates. "Figures of occupational mortality should have been prepared, and the population data should be presented in a form available for that use."

In the securing of efficient returns of vital statistics the author is of the opinion that the great problem is whether or not the Federal Government can take an effective part in the conduct of the registration of vital statistics.

Declaring that "the history of the registration of vital statistics in the United States has been that of a most valuable and necessary institution of modern society neglected amid more or less pioneer and primitive conditions," the author is of the opinion that future development will be along one of several lines: A continuation of the present system, under which the Federal Government is weak and helpless; securing, by congressional action, of greater cooperation between the States and the Federal Government; or a complete nationalization of vital statistics.

UNITED STATES.—*Public Health Service. A Sickness Survey of North Carolina, by Lee K. Frankel and Louis I. Dublin. Reprint No. 367 from the Public Health Reports, October 13, 1916. 27 pp.*

For this survey, which is the third of a series of sickness surveys in typical American communities, the State of North Carolina was chosen because it includes rural as well as urban communities and offers an opportunity to compare the amount of sickness in the white race with that in the colored race. The report covers sex, age, occupation, disease, duration of sickness, medical attendance, and extent of disability, and in addition notes the color of the families canvassed. The survey was made during the week of April 17, 1916, and attention is called to the fact that in that State April is one of the most healthful months of the year, showing, next to September, the least number of deaths. A total of 14,112 families was canvassed, representing 66,007 persons, this number being about 2.5 per cent of the total population. Of those 15 years of age and over more than 3 per cent are reported as constantly sick. About 80 per cent of the total canvassed were reported as sick enough to render them unable to work. The average days of disability per annum is 7.6 per capita for white males and 10.2 per capita for white females, the corresponding figures for the colored race being 7.4 days for males and 11.3 for females.

#### FOREIGN COUNTRIES.

AUSTRALIA.—*Department of Home Affairs. Digest No. 25. 30th September, 1916. Melbourne [1916]. 275 pp.*

Contains report of the bureau of census and statistics, which includes a table showing 115,222 beneficiaries of old-age and invalid pensions receiving an annual aggregate rate of payment of approximately £2,901,170 (\$14,118,543.81). Includes also the report of the prices board, which was appointed on March 28, 1916, to inquire into and recommend fair and reasonable prices for flour and bread throughout Australia. As a result of its recommendations, prices were so reduced as to effect an estimated annual saving of approximately £1,000,000 (\$4,866,500), or equal to £1 5s. (\$6.08) per average family.

BRAZIL.—*State of San Paul. Boletim do Departamento Estadual do Trabalho. Anno V., No. 19. São Paulo, 1916.*

History of immigration in the State, homestead law, labor contracts, task work, free market places, industrial accidents in the capital city, prices of prime necessities, labor market, immigration during the first quarter of 1916.

CANADA.—*Department of Labor. Report for the fiscal year ending March 31, 1916. Ottawa, 1916. 121 pp.*

A report on the work of the department for the year. The fair-wages branch prepared 122 wage schedules during the year to secure the payment of such wages to workmen on Government contracts as were current in each of the trades in interest. In some cases a minimum-wage rate is prepared in advance of contracting and this is embodied in the contract, while in others a general clause is inserted in the contract requiring the payment of rates current in the district. The number of schedules prepared during the period July, 1900, to March, 1916, was 3,498. A table is given showing the departments of Government affected, the complaints, and the results of investigation in cases referred to the fair-wage officers during the year.

It is reported that apart from other duties of the Department of Labor, it was employed, on request, during the year at various points in the adjustment of labor troubles. Disputes of exceptional difficulty were successfully handled.

Considerable space is devoted to "Prices in Canada." The following summary shows the department's index numbers for certain dates, based on the wholesale prices of 272 articles:

INDEX NUMBERS BASED ON WHOLESALE PRICES OF 272 ARTICLES, 1890 TO DECEMBER, 1915.

Year.	Index number.	Year.	Index number.	Date.	Index number.
1890.....	110.3	1911.....	127.4	July, 1914.....	134.6
1897.....	92.2	1912.....	134.4	September, 1914.....	141.3
1900.....	108.2	1913.....	135.5	January, 1915.....	138.9
1907.....	126.2	1914.....	136.1	July, 1915.....	150.2
1908.....	120.8	1915.....	148.0	December, 1915.....	161.1

A table was also prepared showing the weekly cost of 30 articles of food, coal, wood and coal oil, and rent, of a family of five, in terms of an average cost based on the prices of such commodities in some 60 cities, for the years 1900, 1905, and for each month 1914 and 1915.

In 1915 the average weekly budget amounted to \$13.84 as compared with \$14.31 in 1914 and \$14.02 in 1913. The items showing a reduction were fuel, lighting, and rent, with food showing an advance.

It is reported that the war has evidently subjected trade-unionism to a severe strain; the returns for the year show a loss of 120 local branches and 22,820 members. The numerical strength of organized labor at the end of the year was 143,343, comprising 1,661 local branches, having a membership of 114,722 owing allegiance to international organizations; 191 local branches, with 23,664 members noninternational; and 31 independent bodies reporting a membership of 4,957.

The report notes 43 trade disputes (5 of which were carried over from the previous year) affecting 96 establishments and 9,140 employees, with an approximate loss of 106,149 working days. As to causes, 26 were due to controversies involving wages. These affected 52 of the 96 establishments, and 5,118 of the 9,140 persons affected in all. Settlements were in favor of the employees in 15 strikes, affecting 52 establishments, and involving 7,332 persons; in favor of the employers in 16 strikes, affecting 26 establishments, and in-

volving 39,987 persons. The remaining strikes were either compromised or not settled at the time of the present report, or the result was not reported to the department.

There were during the year 836 workpeople killed or fatally injured, while 4,949 accidents were nonfatal. Most of these accidents were in the metal, engineering, and shipbuilding trades.

CANADA.—*Statement re Government Annuities. Sessional Paper No. 24. Appendix M.*

These reports show the number of annuities purchased through the Post Office Department during each of the years ending March 31, 1914, 1915, and 1916.

At the end of the fiscal year 1913-1914 there were 3,381 contracts of annuity in force, having a total value of \$2,035,931. At the close of the year, March 31, 1915, the number of policies in force was 3,625, and their total value was \$2,315,586. On the same date, 1916, there were 3,920 policies in force with a total value of \$2,715,552.

During the first year 319 annuities were contracted for, amounting to \$86,557, for which \$390,887 was received by the department. During the second year 263 annuities were contracted for, aggregating \$61,051 in amount of annuities, the purchase money for which amounted to \$314,129. During the third year 325 annuities were purchased, amounting to \$91,166, for which \$441,696 purchase money was received. During the three years the amount transferred by the Government to maintain the reserve has amounted to \$309,725.

CHILE.—*Anuario Estadístico de la República de Chile. Vol. X. Agricultura. Año 1914-15. Santiago de Chile, 1916. 308 pp.*

Statistics of agriculture in the various States in the Republic. The data are based on 84,001 individual schedules furnished.

—*Sinopsis Estadística de la República de Chile. Oficina central de estadística. Santiago de Chile, 1916. 107 pp.*

Statistical year book of the Republic.

DENMARK.—*Centralarbejds-Anvisningskontoret. Virksomhed, 1915-16. Copenhagen. 1916. 14 pp.*

The system of unemployment exchanges for Denmark was reorganized by act of April 29, 1913, in such way as to coordinate the system for all the cities of the country, by making the existing exchange at Copenhagen, which began operations July 4, 1901, a national central one, the head of the system. Cooperation was also brought about between the system of exchanges and the subsidized unemployment funds by requiring a person in receipt of unemployment aid to be registered at an exchange. The board of directors of the system consists of a managing director and 10 members, 5 each representing the employers and employees.

The following table shows the result of operations of the central exchange for Copenhagen covering the fiscal years ending March 31, 1902, 1907, 1912 to 1916:

OPERATIONS OF THE COPENHAGEN CENTRAL EXCHANGE FOR DENMARK FOR EACH OF THE FISCAL YEARS ENDING MAR. 31, 1902, 1907, AND 1912 TO 1915.

Fiscal year ending Mar. 31—	Applica- tions.	Vacancies reported.	Situations filled.
1902.....	26,873	10,751	12,143
1907.....	50,916	34,638	36,839
1912.....	40,514	26,974	29,011
1913.....	47,600	28,576	33,269
1914.....	49,893	28,965	33,778
1915.....	85,404	28,167	33,773
1916.....	87,115	32,423	37,921



DISTRIBUTION BY INDUSTRY OF PERSONS PLACED IN EMPLOYMENT BY THE EXCHANGE DURING THE FISCAL YEAR ENDING MAR. 31, 1916, AND TOTAL FOR FISCAL YEARS 1901 TO 1916.

Industry.	Fiscal years.			
	1915-16		1901-1916	
	Number.	Per cent.	Number.	Per cent.
Liberal professions, public service, etc.....	2	( <sup>1</sup> )	71	( <sup>1</sup> )
Agriculture and gardening.....	1,543	4.1	28,521	6.5
Handwork and manufacturing.....	7,245	19.1	120,587	27.5
Stores, offices, hotels, and transportation.....	15,217	40.1	104,992	23.9
Domestic service.....	11,296	29.8	149,361	34.0
Other employments.....	2,618	6.9	35,696	8.1
Total.....	37,921	100.0	439,228	100.0

<sup>1</sup> Less than one-tenth of 1 per cent.

GERMANY.—*Amtliche Nachrichten des Reichsversicherungsamts. September 15, 1916. Berlin. (Monthly.)*

Current reports on the operation of the German social insurance system.

— *Reichs-Arbeitsblatt, herausgegeben vom Kaiserlichen Statistischen Amte, Abteilung für Arbeiterstatistik. October, 1916.*

Current reports on the German and foreign labor markets, employment, unemployment, working conditions, collective agreements, employers' and workmen's organizations, labor legislation, and industrial courts.

— *Statistisches amt der Stadt Berlin. Die Grundstücks-Aufnahme vom 15. Oktober 1910 sowie die Wohnungs- und die Bevölkerungs-Aufnahme vom 1. Dezember 1910 in der Stadt Berlin und 44 Nachbargemeinden. Erste Abteilung: Stadt Berlin. 2. Heft: Die Aufnahme der bewohnten Wohnungen und Haushaltungen vom 1. Dezember 1910. Berlin, 1914. 122 pp.*

The results of a housing census undertaken in Berlin on December 1, 1910, in connection with the general German population census. Much more detailed data are shown in the present census than in the preceding housing census of 1905. These details relate chiefly to the composition of the individual apartments (heatable and nonheatable rooms, kitchen, other rooms, such as closets, pantries, servants' rooms, alcoves, etc.), and to the convenience offered (steam or hot-water heat, gas, electric light, bath, running hot and cold water, etc.).

On the date of the census the Berlin population of 1,996,994 persons was housed in 555,416 apartments, consisting of 1,093,121 heatable or nonheatable rooms, exclusive of pantries, servants' chamber, baths, kitchen, etc., or 1,739,943 rooms, if these are included. The total renting value of these apartments was 328,594,839 marks (\$78,205,572). Of the total number of apartments, 991 consisted only of rooms used for industrial purposes, or of a kitchen, or of small chambers, 40,690 consisted of 1 room, 186,756 of 2 rooms, 180,850 of 3 rooms, 62,676 of 4 rooms, 36,269 of 5 rooms, 20,161 of 6 rooms, and 27,023 of 7 or more rooms. In 943 apartments the occupants had to share the kitchen with the occupants of other apartments, and 34,508 apartments had no kitchen at all. Roomers were kept in 41,115 households and lodgers (renting only a bed per night) in 58,400. The total number of roomers kept was 64,031 and that of lodgers 88,560.

— *Statistisches Jahrbuch für das Deutsche Reich. Herausgegeben vom Kaiserlichen Statistischen Amte. vol. 37, 1916. Berlin, 1916. XXXI, 143 pp.*

The thirty-seventh volume of the Statistical Yearbook for the German Empire, published for the year 1916. That this issue is much smaller in volume

than preceding issues is due to the fact that on account of the war recent and complete statistics on a number of subjects usually dealt with in the yearbook were not available for the present issue. The chapters relating to foreign trade, consumption, education, elections for the Reichstag, army and navy, finances, and German colonies, as well as all international summaries, were entirely omitted. Some of the labor statistics contained in the yearbook have been reproduced in the present number of the MONTHLY REVIEW.

GREAT BRITAIN.—*Board of Education. Annual Report for 1915 of the chief medical officer of the board of education. London, 1916. 169 pp.*

Besides chapters on the school medical service, physical conditions, medical treatment, and the physical education of the child, this report contains a chapter on juvenile employment, with some consideration of the effect of the European war on this class of employment. The report will be treated in more detail in a future number of the Review.

— *Canteen committee of the central control board (liquor traffic). Feeding the munition worker. London, 1916. 29 pp. Illustrated.*

In preparing this report recognition has been taken of the fact that "there is now an overwhelming body of evidence and experience which proves that productive output in regard to quality, amount, and speed is largely dependent upon the physical efficiency and health of the worker," and that such physical fitness is dependent upon a dietary which should contain a sufficient quantity of nutritive material in proper proportions, suitably mixed, easily digestible, appetizing, and attractive, and obtainable at low cost. The report aims to show by detailed description, explanation, and illustration how this may be done through the agency of the industrial canteen. There are four designs for canteens to accommodate from 70 to 1,000 people.

— *First and second reports on the work of the National Insurance Audit Department, 1912-14, and 1915. London. 42 pp. 27 pp.*

Report of the auditing department under the national insurance act, which required that the books of all approved societies and branch societies and the insurance committee of a county or a county borough shall be submitted when required to the department. The department was formed in July, 1912.

INDIA.—*Department of Statistics. Wheat Prices in India. Calcutta, 1916. 15 pp.*

Returns showing the wholesale prices of wheat, semimonthly, from July 31, 1914, to August 31, 1916, as furnished by the local governments and administrations.

— — *Wholesale and Retail (Fortnightly) Prices. Calcutta, 1916. 21 pp.*

Returns showing the wholesale prices of cereals, pulses, oil seeds, sugar (raw), salt, etc., in India by districts for the fortnight ending August 31, 1916.

INTERNATIONAL.—*Annuaire international de statistique publié par l'Office Permanent de l'Institut International de Statistique. Vol. I. Etat de la population (Europe). The Hague, 1916. VIII, 166 pp.*

The first volume of an international yearbook the publication of which has been undertaken by the Permanent Office of the International Statistical Institute founded in 1913. This volume presents population statistics of all European countries based on census results and official estimates. After showing the population and its density, the volume analyzes the population as to sex, conjugal condition, age, nationality and place of birth, language, illiteracy, and mental or physical infirmity.

INTERNATIONAL.—*Bulletin des Internationalen Arbeitsamtes. Vol. 15, Nos. 8 and 9. Jena, 1916.*

Text or title of labor laws, orders, decrees, etc., recently promulgated in Germany, France, Sweden, Switzerland, the United States, Great Britain, and the Netherlands.

—*International Review of Agricultural Economics. Monthly Bulletin of the International Institute of Agriculture, Bureau of Economic and Social Intelligence. Vol. 69, No. 9. September, 1916. Rome.*

The present number is devoted to the movements of agricultural cooperation and association, insurance and thrift, credit, and agricultural economy in general in various countries.

ITALY.—*Bollettino dell' Ufficio del Lavoro. Ministero per l'Industria, il Commercio e il Lavoro. Rome. October 1 and 16, 1916. (Semimonthly.)*

Current reports on the labor market, labor disputes, employers' and workmen's organizations, retail prices, labor legislation, etc.

—*Ministero di Agricoltura, Industria e Commercio. Direzione Generale del Credito e della Provvidenza. Annali del Credito e della Provvidenza. "Provvedimenti in materia di economia e di finanza emanati in Italia in seguito alla guerra europea." Part 3: January 1, 1916, to June 30, 1916. (Series II, vol. 10, part 3.)*

The present volume gives the text of all economic and financial measures—laws, decrees, ordinances, circular orders, etc.—enacted in Italy between January 1 and June 30, 1916, on account of the European war.

QUEENSLAND.—*Department of labor. Industrial Gazette, 10th October, 1916. Brisbane, 1916. 87 pp.*

Contains reports of departmental agents as to industrial conditions in various parts of the State. The returns from labor exchanges seem to indicate gradually decreasing unemployment, especially in the country districts. The report notes that arrears of wages were secured by the department since September 1, 1916, amounting to £999 17s. 8d. (\$4,865.93) and benefiting 336 persons. There were 18 factory accidents since September 1, half of these being slight injuries.

SPAIN.—*Boletín del Instituto de Reformas Sociales. Publicación mensual. Madrid, October, 1916.*

Report of the secretary's office and of the special divisions; strikes reported in September, 1916, and for the first quarter of 1916; legislation enacted and proposed; court decisions in industrial accidents. Foreign notes: Strikes and lockouts in Great Britain in August, 1916, and in Italy during 1913; industrial accident law in Cuba.

SWEDEN.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. Stockholm, 1916. No. 9.*

Current reports on the labor market, economic measures taken on account of the war, mediation and arbitration of labor disputes, housing census 1912–1913, strikes and lockouts in Sweden, factory inspection, employment offices, retail prices, and labor statistics of foreign countries.

SWITZERLAND.—*Zentralstelle schweizerischer arbeitsämter. Elften Geschäftsbericht für das Jahr 1915. Zurich, 1916. 36 pp.*

This is a report of the central office of the Swiss public employment bureaus as to the activities of the affiliated local bureaus during the year 1915. In the report are included 15 employment bureaus, which in 1915 placed 64,855 applicants for positions, as against 62,952 in 1914. The Federal Government subsidized these bureaus to an amount of 60,420 francs (\$11,661).



# 170 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

The table which follows shows by sex the number of applications for work (exclusive of applications from persons not residing within the district of the employment bureaus) made to the federated bureaus during the individual months of 1915, the vacancies reported, and the number of applicants per 100 vacancies:

## STATISTICS OF FEDERATED EMPLOYMENT BUREAUS OF SWITZERLAND FOR EACH MONTH OF 1915.

Month.	Applicants.			Vacancies reported.			Number of applicants per 100 vacancies reported.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
January.....	7,732	2,162	9,894	4,292	1,577	5,869	180.1	137.0	168.5
February.....	6,240	1,996	8,236	4,267	1,642	5,909	146.2	121.5	139.3
March.....	7,714	2,401	10,115	6,311	2,028	8,339	122.2	113.4	121.2
April.....	6,936	2,721	9,657	5,628	2,081	7,709	123.2	130.7	125.2
May.....	6,448	2,578	9,026	6,345	2,092	8,437	101.6	123.2	106.9
June.....	6,926	2,361	9,287	6,755	2,353	9,108	102.5	100.3	101.9
July.....	6,696	2,393	9,089	5,332	2,064	7,396	125.5	115.9	122.8
August.....	6,381	2,404	8,785	5,694	2,222	7,916	112.0	108.1	110.9
September.....	6,124	2,507	8,631	6,264	2,240	8,504	97.7	111.9	101.4
October.....	6,470	2,629	9,099	6,191	2,079	8,270	104.5	121.1	110.0
November.....	6,376	2,347	8,723	4,893	1,743	6,636	130.5	134.0	131.4
December.....	5,265	1,671	6,936	3,818	1,647	5,465	137.8	101.4	126.9
Total.....	79,308	28,170	107,478	65,790	23,768	89,558	120.5	118.5	120.0

The activities of the federated public employment bureaus during the five-year period—1911–1915—with respect to number of local applicants, vacancies reported, vacancies filled, nonresident and transient applicants, are shown in the following table:

## ACTIVITIES OF FEDERATED EMPLOYMENT BUREAUS OF SWITZERLAND, BY YEARS, 1911 TO 1915.

Year.	Local applicants.			Vacancies reported.			Vacancies filled.			Nonregistered applicants.	
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Non-residents.	Transients.
1911.....	68,476	19,743	88,219	53,741	26,062	79,803	40,326	12,385	52,711	12,015	75,080
1912.....	75,121	22,201	97,322	58,741	29,294	88,035	43,865	14,471	58,336	13,211	86,439
1913.....	76,989	22,501	99,490	53,755	30,606	84,361	40,060	14,808	54,868	13,420	116,980
1914.....	89,060	28,459	117,519	58,000	29,797	87,797	45,682	17,270	62,952	12,964	90,586
1915.....	79,308	28,170	107,478	65,790	23,768	89,558	49,025	15,830	64,855	11,761	41,020

Inclusive of nonregistered applicants, the Swiss public employment offices received altogether 160,259 applications for work in 1915, as compared with 221,069 in the preceding year, and procured employment for 64,855 (40.5 per cent), as against 62,952 (28.5 per cent) in 1914. A noteworthy fact is the decrease by 49,566 in the number of transient applicants. Of the 49,025 male workers placed, in the year under review, 15,529 (31.7 per cent) were skilled industrial workers, 5,330 (10.9 per cent) were agricultural workers, and 27,868 (56.8 per cent) were unskilled workers.

In discussing the conditions of the labor market in 1915, the report declares that a change for the worse was prevented by suitable adaptation of the entire economic life to the extraordinary conditions created by the war. Business

conditions improved in most industries, and during the second half of the year the relation between the supply and demand for labor became essentially more satisfactory. The chief difficulty in a number of large industry branches, especially the textile industries, was the lack of raw materials. The watch industry, very seriously affected at first by the consequences of the war, is now recovering. Agriculture and the foodstuff industries had a prosperous year. The tourist industry continued stagnant and this condition has meant considerable unemployment among hotel and restaurant employees.

· UNION OF SOUTH AFRICA.—*Department of Mines and Industries, Annual Report of the Government Mining Engineer for the calendar year ended 31st December, 1915. Pretoria, 1916. 200 pp. 15 insert tables.*

According to this report there were employed in the service of mines and allied concerns in December, 1915, 299,673 persons, 82.4 per cent of whom were engaged in the gold-mining industry. During the year 1915, £15,879,675 (\$77,298,438.39) was paid out in wages, a decrease of 3.8 per cent over 1914. The output was valued at £43,531,009 (\$211,850,184.15), of which 88.8 per cent is represented by the gold production. The report records a total of 2,679 separate accidents, the number of persons involved not being given. There were 2,340 injuries and 811 deaths. On mines, 35.96 per cent of the deaths resulted from falls of ground, and 21.52 per cent resulted from explosives. The total compensation paid out in 611 death claims during 1915 was £28,274 (\$137,595.42) or an average of \$225.20 per case; the total amount paid in respect of all injuries was £66,822 (\$325,189.26).

#### RECENT UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

ACLAND, F. A. *Canadian legislation concerning industrial disputes, 1916, 8 pp.*

A discussion of the enactment and operation of Dominion Statutes by the Deputy Minister of Labor. Reprinted from the Labor Gazette, Vol. XVI, No. 9, April, 1916.

AMALGAMATED SOCIETY OF ENGINEERS. *Sixty-fifth annual report. London, 1915. 480 pp.*

AMERICAN ASSOCIATION FOR LABOR LEGISLATION. *Review of labor legislation of 1916. The American Labor Legislation Review, Vol. VI, No. 3, New York, September, 1916. pp. 277-331.*

AMERICAN FEDERATION OF LABOR. *Proceedings of thirty-sixth annual convention, Baltimore, Md., Nov. 13-25, 1916. 401 pp.*

For summary of these proceedings see pp. 5-10 of this number of the MONTHLY REVIEW.

— ARIZONA BRANCH. *Proceedings of the fifth annual convention, Tucson, Aug. 7-11, 1916. 45 pp.*

— — — *Constitution. 1916. 20 pp.*

— CALIFORNIA BRANCH. *Proceedings of the seventeenth annual convention, Eureka, Oct. 2-6, 1916. 115 pp.*

— — — *Constitution, 1916. 24 pp.*

— GEORGIA BRANCH. *Fourth annual report for 1915.*

— KANSAS BRANCH. *Proceedings of the tenth annual convention, Wichita, Aug. 14-16, 1916. 64 pp.*

— LOUISIANA BRANCH. *Proceedings of the fourth annual convention, Monroe, Apr. 3-5, 1916. 52 pp.*

— MARYLAND AND DISTRICT OF COLUMBIA BRANCH. *Proceedings of twelfth annual convention, Annapolis, Mar. 6-10, 1916. 102 pp.*

- AMERICAN FEDERATION OF LABOR.—MASSACHUSETTS BRANCH. *Constitution, 1915.* 24 pp.
- *Proceedings of the thirty-first annual convention, Springfield, Sept. 11-14, 1916.* 128 pp.
- MINNESOTA BRANCH. *Proceedings of the thirty-fourth annual convention, Hibbing, July 17-19, 1916.* 77 pp.
- NEBRASKA BRANCH. *Proceedings of the ninth annual convention, Fremont, Sept. 12-15, 1915.* 58 pp.
- NEW HAMPSHIRE BRANCH. *Proceedings of the fifteenth annual convention, Dover, July 18-20, 1916.* 47 pp.
- TEXAS BRANCH. *Proceedings of the nineteenth annual convention, Houston, Apr. 24-28, 1916.* 122 pp.
- UTAH BRANCH. *Proceedings of the twelfth convention, Eureka, May 8-10, 1916.* 39 pp.
- VERMONT BRANCH. *Proceedings, constitution, and by-laws of fifteenth convention, Barre, Aug. 8-10, 1916.* 55 pp.
- WASHINGTON BRANCH. *Constitution, 1915.*
- *Proceedings of the fifteenth annual convention, North Yakima, Jan. 17-20, 1916.* 184 pp.
- AMERICAN GAS INSTITUTE. *Committee on accident prevention. Reports, 1914, 1915, 1916.* 34, 36, and 6 pp.
- ARBEIDERNES FAGLIGE LANDSORGANISATION. *Beretning for aaret 1915.* Christiania, 1916. 263 pp.
- Report on trade unions in Norway for the year 1915.
- ARONOVICI, CAROL. *The social survey.* Philadelphia, Harper, 1916. 255 pp.
- Records recent experience in the field of social surveys and outlines in a general way the principal features of social-survey work.
- BARNETT, GEO. E., AND MCCABE, DAVID A. *Mediation, investigation, and arbitration in industrial disputes.* New York, Appleton, 1916. 209 pp.
- BOWSFIELD, C. C. *How boys and girls can earn money.* Chicago, Forbes, 1916. 247 pp.
- BRASSEY, EARL. *Work and wages.* London, Longmans, 1916. 200 pp.
- BRITISH INSTITUTE OF SOCIAL SERVICE. *Eleventh annual report, December, 1915.* 23 pp.
- BUREAU OF RAILWAY ECONOMICS. *Memorandum on the extent to which the eight-hour day is enjoyed among wage earners generally in the United States, 1916.* 4 typewritten pages.
- CANADIAN FEDERATION OF LABOR. *Proceedings of the seventh annual meeting, Montreal, Sept. 8-10, 1915.* 23 pp.
- CAVAILLE, J. *Le charbon professionnel (Les intoxications professionnelles).* Paris, 1911. 362 pp. Illustrated.
- A technical treatise on occupational anthrax, dealing with its history, symptoms, and treatment, and giving statistics of the disease and the laws and regulations concerning it in force in France.
- CHINA YEAR BOOK. 1916. 729 pp. (Printed in English.)
- CHURCH, VIRGINIA. *The servant question.* Hampton Normal and Agricultural Institute, Hampton, Va. 15 pp.
- CONSUMERS' LEAGUE OF NEW YORK CITY. *Behind the scenes in a restaurant.* New York, 1916. 47 pp.
- A study of 1,017 women restaurant employees, with special reference to their age, nationality, home conditions, hours of labor, wages, regularity of employment, and opportunity for advancement.
- CONSUMERS' LEAGUE OF THE DISTRICT OF COLUMBIA. *Fourth report. March, 1915, to October, 1916.* 40 pp.
- Contains brief study of the cost of living of wage-earning women in the District of Columbia.



DAUTREMER, JOSEPH. *The Japanese empire*. New York. Scribner, 1915. 319 pp.  
Contains, among other material, a general account of economic conditions in Japan.

DYMOUSKI, DR. T. VON. *Die alters- und invaliden-versicherung in der Schweiz*. (Zürcher Volkswirtschaftliche Studien, 12 Heft.) Zurich and Leipzig. 26½ pp., chart.

A study on old-age and invalidity insurance in Switzerland. The scope of cantonal and private institutions for these forms of insurance is described and the premiums and benefits shown. Comparisons are made with old-age and invalidity insurance systems of other countries.

ELLIOTT, HOWARD, President, New York, New Haven & Hartford Railroad Co. *The case for the railroads; the significance of the surrender of Congress to Brotherhoods*, 1916. 16 pp.

Reprinted from the magazine section of the New York Times, September 10, 1916.

FORD MOTOR COMPANY. *The Ford Motor Co.'s work with profit sharing*. An investigation by the Detroit Evening News. Nov. 24, 1914. 27 pp.

An account of the results of the profit-sharing scheme during the first five months of its existence. The average gain for men participating in profits is stated to have been 130½ per cent in bank deposits, 86 per cent in life insurance, and 87½ per cent in value of homes owned. Each profit-sharing employee was depositing in bank or investing in homes and lots an average of \$48.76 a month, and there was a marked improvement in living conditions.

FRANKEL, LEE K. AND DUBLIN, LOUIS I. *A sickness survey of Boston, Mass.* Published by the Metropolitan Life Insurance Co., New York. 23 pp.

In the conclusions drawn from this survey, it is stated that nearly 2 per cent of the population of Boston were found to be sick, 90 per cent of the cases involved disability for work, and among the total males and females of working age there was a loss of earnings for about seven days per person per year.

GILLMAN, FREDERICK J. *The workers and education*. London, George Allen & Urwin (Ltd.), [1916] 66 pp.

A record of educational experiments with wage earners, presented under the general heads of settlements, guest houses, lecture schools and study circles, and a rural experiment.

GREIG, C. A. *Women's work on the land*. London. Harrold [1916] 48 pp.

The purpose of this book is to show the urgent need of women workers in agriculture in Great Britain to meet the conditions growing out of the war.

HAYES, EDWARD C. *Introduction to the study of sociology*. N. Y., Appleton, 1916. 718 pp.

Discusses in detail the practical social problems of the day. It is claimed to be the only comprehensive work on sociology which leads up to and culminates in a treatment of the problems of education from the sociological point of view.

HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT, AND PREVENTION OF TUBERCULOSIS. *Twelfth Report*, 1916. 94 pp. Illustrated.

Contains studies of the storage, handling, and sale of food in Philadelphia, and the food-inspection service in Philadelphia.

INTERNATIONAL HARVESTER CO. *Benefit and pension plans*. Revised June 1, 1916. Chicago, 1916. 50 pp.

ISAY, HARRY. *Liberalismus und arbeiterfrage in Belgien (1830-1852)*, Munich, (Munchener volkswirtschaftliches studien, v. 135). 1915. 102 pp.

A history of liberalism and the labor movement in Belgium from 1830 to 1852.

JONES, F. ROBERTSON. *Digest of the Porto Rico Workmen's Compensation Law, New York, July, 1916.* 19 pp.

Besides the digest as indicated by the title, a full text of the law (Apr. 13, 1916) is given.

LILIENTHAL, MRS. M. L. *From fireside to factory. Rand School of Social Science, New York, 1916.* 66 pp.

A short account of the transformation in the working conditions of women since the beginning of the nineteenth century, and of woman's position in the American labor movement.

MACLEAN, ANNIE M. *Women workers and society. Chicago, McClurg, 1916.* 135 pp.

This book aims to show not only the conditions of labor of women workers, but also the improvements that have been effected in such conditions by organized society.

MARQUIS, F. J. ed. *Handbook of employments in Liverpool. (Liverpool Education Committee.) Liverpool, 1916.* 277 pp.

Gives a list of trades and occupations in Liverpool, showing nature of work, previous education required, apprenticeship, wages and hours of labor, and facilities for continued vocational education other than secondary schools and the university.

MÜNSTERBERG, HUGO. *Business psychology. Chicago, La Salle Extension University, 1915.* 296 pp.

Deals with the application of psychology to salesmanship and advertising, training for technical labor, vocational fitness, efficiency, avoidance of fatigue, and other modern business problems.

NAGEL, CHARLES. *The railroad-wage law. Address before the Engineers' Club of St. Louis, October 6, 1916.* 16 pp.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION. *Proceedings of the forty-third annual session, Indianapolis, May 10-17, 1916.* 713 pp.

Contains interesting information on war relief, community action through surveys, alcoholism and industry, unemployment, defective classes, municipal welfare work, health insurance, and the relation of social agencies to the public schools.

NATIONAL EMPLOYMENT EXCHANGE, NEW YORK CITY. *Seventh annual report, year ending September 30, 1916.* 22 pp.

The placement record of this exchange for the year shows that over 5,600 men and women were placed in positions averaging from \$8 to \$10 per week to \$6,000 a year.

NATIONAL FEDERATION OF REMEDIAL LOAN ASSOCIATIONS. *Bulletin, November, 1916. Proceedings of the eighth annual convention, Detroit, 1916.* 51 pp.

According to the report of the chairman most of these societies were organized "for the purpose of eliminating as far as possible the activities of the notorious loan sharks" and "have demonstrated the fact that a rate of interest approximating 2 per cent a month is essential to the legitimate conduct of the small-loans business."

— *Work of the remedial loan societies 1915-1916.* 1 folder broadside.

NATIONAL FOOD REFORM ASSOCIATION. *Publication No. 2. Hints toward diet reform.* 34 pp. *Publication No. 4: Economical dishes for workers.* 32 pp. London. No date.

NORSK CENTRALFORENING FOR BOKTRYKKERE. *Aarsberetning 1913 and 1914. Christiania, 1914 and 1915.* 101 pp. and 104 pp.

Annual reports of the Norwegian Central Union for book printers.

NOURSE, EDWARD G. *Agricultural economics*. Chicago, University of Chicago press; c1916. 896 pp.

This is a comprehensive textbook of agricultural economics. It covers the history of agriculture, and such subjects as consumption and production, labor supply, organization and management, market methods and problems, prices, transportation and storage, rent and value of farm land, rural credits, profits in farming, and wages, hours, and conditions of labor of farm workers.

OCEAN ACCIDENT AND GUARANTEE CORPORATION (LTD). SAFETY COMMITTEE. *Accident prevention*. N. Y., 1916. 48 pp.

O'HARA, FRANK. *Introduction to economics*. New York, Macmillan, 1916. 259 pp.

PHELPS, FRANK W. *Work and worship, labor problems* \* \* \* Seattle, Mechanics Pub. Co., c1916. 45 pp.

PHELPS, L. A. *Employment, medical supervision, and safety*. [1916.] 7 pp.

An address by the superintendent of insurance and maintenance of the Avery Co., Peoria, Ill., before the National Safety Council.

PORRITT, ANNIE G. *Laws affecting women and children in the suffrage and non-suffrage States*. National Suffrage Publishing Co., Inc., New York, 1916. 163 pp.

POTTS, RUFUS M. *Unemployment insurance, 1916*. 17 pp.

An address by the insurance superintendent of the State of Illinois, at the 41st annual meeting of the American Academy of Medicine, Detroit, Mich., June 9, 1916.

— *Welfare (social) insurance, 1916*. 13 pp.

An address at the 47th session of the National Convention of Insurance Commissioners at Richmond, Va., Sept. 28, 1916. Undertakes to show to what extent "welfare" insurance is desirable and feasible in the United States and by what means it can be accomplished.

PRIOR, WILLIAM. *After the war problems 1916*. 10 pp.

A paper read by the secretary of New Zealand Employers' Federation at the annual meeting of the Hawke's Bay Employers' Association, Napier, August 23, 1916.

PROTESTANT EPISCOPAL CHURCH. *The plan to pension the retiring clergy. Church Pension Fund*. New York, 1916. 20 pp.

SMITH, HARRY B. *Establishing industrial schools*. Boston, Houghton, 1916. 167 pp.

The purpose of this book is to suggest to a State, city, or community concrete and practical methods of determining what sort of industrial and trade schools it needs, what should be taught in them, and how to select and prepare the instructors.

STEINER, E. A. *Nationalizing America*. New York, Revell, c1916. 240 pp.

SUGAR, MAURICE. *Working class justice*. Detroit, c1916. 40 pp.

A short treatise on the law of injunctions in labor disputes, published by the Detroit Federation of Labor.

TOWNE, EZRA T. *Social problems*. New York, Macmillan, 1916. 406 pp.

A study of present-day social conditions. Contains chapters on population, immigration, child labor, women in industry, sweating system, labor organizations, unemployment, criminal and defective classes, marriage and divorce, liquor problem, poverty, and conservation of natural and human resources.



**UNDERWRITER'S LABORATORIES.** *List of appliances inspected for accident hazard, July, 1916. 57 pp.*

This list includes materials and appliances which have been investigated for life and accident hazards and have been found to be sufficiently devoid of these hazards to receive favorable recognition by the Underwriters' Casualty Council. The list is divided into two main divisions, mechanical and electrical.

— *List of inspected electrical appliances. October, 1916. Supplement to April, 1916. 24 pp.*

**UNIVERSITY DEBATORS' ANNUAL, 1915-16.** *Edited by Edward Charles Mabie. New York, H. W. Wilson Co., 1916. 294 pp.*

Contains in addition to other material chapters on restriction of immigration and compulsory industrial insurance.

**WOMEN'S EDUCATION AND INDUSTRIAL UNION.** *Studies in economic relation of women. Vol. VI. (Boot and shoe industry in Massachusetts as a vocation for women), 1916. 109 pp.*

Reprint of Bul. 180 of the U. S. Bureau of Labor Statistics.

**YOUNG MEN'S CHRISTIAN ASSOCIATION. INTERNATIONAL COMMITTEE. INDUSTRIAL DEPARTMENT.** *Among industrial workers. A handbook for associations in industrial fields. New York, c1916. 118 pp.*

## SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

*[The publication of the Annual and Special Reports and of the bimonthly Bulletin has been discontinued, and since July, 1912, a Bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These Bulletins are numbered consecutively in each series and also carry a consecutive whole number, beginning with No. 101. A list of the series, together with the individual Bulletins falling under each, is given below. A list of the Reports and Bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application.]*

**Wholesale Prices.**

- No. 1. Wholesale prices, 1890 to 1912. (Bul. 114.)
- No. 2. Wholesale prices, 1890 to 1913. (Bul. 149.)
- No. 3. Index numbers of wholesale prices in the United States and foreign countries. (Bul. 173.)
- No. 4. Wholesale prices, 1890 to 1914. (Bul. 181.)
- No. 5. Wholesale prices, 1890 to 1915. (Bul. 200.)

**Retail Prices and Cost of Living.**

- No. 1. Retail prices, 1890 to 1911: Part I. (Bul. 105: Part I.)  
Retail prices, 1890 to 1911: Part II—General tables. (Bul. 105: Part II.)
- No. 2. Retail prices, 1890 to June, 1912: Part I. (Bul. 106: Part I.)  
Retail prices, 1890 to June, 1912: Part II—General tables. (Bul. 106: Part II.)
- No. 3. Retail prices, 1890 to August, 1912. (Bul. 108.)
- No. 4. Retail prices, 1890 to October, 1912. (Bul. 110.)
- No. 5. Retail prices, 1890 to December, 1912. (Bul. 113.)
- No. 6. Retail prices, 1890 to February, 1913. (Bul. 115.)
- No. 7. Sugar prices, from refiner to consumer. (Bul. 121.)
- No. 8. Retail prices, 1890 to April, 1913. (Bul. 125.)
- No. 9. Wheat and flour prices, from farmer to consumer. (Bul. 130.)
- No. 10. Retail prices, 1890 to June, 1913. (Bul. 132.)
- No. 11. Retail prices, 1890 to August, 1913. (Bul. 136.)
- No. 12. Retail prices, 1890 to October, 1913. (Bul. 138.)
- No. 13. Retail prices, 1890 to December, 1913. (Bul. 140.)
- No. 14. Retail prices, 1907 to December, 1914. (Bul. 156.)
- No. 15. Butter prices, from producer to consumer. (Bul. 164.)
- No. 16. Retail prices, 1907 to June, 1915. (Bul. 184.)
- No. 17. Retail prices, 1907 to December, 1915. (Bul. 197.)

**Wages and Hours of Labor.**

- No. 1. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912. (Bul. 128.)
- No. 2. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912. (Bul. 129.)
- No. 3. Union scale of wages and hours of labor, 1907 to 1912. (Bul. 131.)
- No. 4. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912. (Bul. 134.)
- No. 5. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912. (Bul. 135.)
- No. 6. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912. (Bul. 137.)
- No. 7. Union scale of wages and hours of labor, May 15, 1913. (Bul. 143.)
- No. 8. Wages and regularity of employment in the dress and waist industry of New York City. (Bul. 146.)
- No. 9. Wages and regularity of employment in the cloak, suit, and skirt industry. (Bul. 147.)
- No. 10. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913. (Bul. 150.)
- No. 11. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912. (Bul. 151.)
- No. 12. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913. (Bul. 153.)
- No. 13. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913. (Bul. 154.)
- No. 14. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913. (Bul. 161.)
- No. 15. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913. (Bul. 163.)
- No. 16. Wages and hours of labor in the iron and steel industry, 1907 to 1913. (Bul. 168.)
- No. 17. Union scale of wages and hours of labor, May 1, 1914. (Bul. 171.)
- No. 18. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914. (Bul. 177.)
- No. 19. Wages and hours of labor in the boot and shoe industry, 1907 to 1914. (Bul. 178.)
- No. 20. Wages and hours of labor in the men's clothing industry, 1911 to 1914. (Bul. 187.)
- No. 21. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914. (Bul. 190.)
- No. 22. Union scale of wages and hours of labor, May 1, 1915. (Bul. 194.)
- No. 23. Street railway employment in the United States. (Bul. 204.) [In press.]

## MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

### Employment and Unemployment.

- No. 1. Proceedings of the American Association of Public Employment Offices. (Bul. 192.)
  - No. 2. Unemployment in the United States. (Bul. 195.)
  - No. 3. Proceedings of Employment Managers' Conference. (Bul. 196.)
  - No. 4. Proceedings of the Conference of Employment Managers' Association of Boston. (Bul. 202.)
  - No. 5. The British System of Labor Exchanges. (Bul. 206.)
- For material relating to these subjects, but not included in this series, see Miscellaneous series, Nos. 1, 10, 12 (Buls. 109, 172, 183).

### Women in Industry.

- No. 1. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia. (Bul. 116.)
  - No. 2. Working hours of women in the pea canneries of Wisconsin. (Bul. 119.)
  - No. 3. Employment of women in power laundries in Milwaukee. (Bul. 122.)
  - No. 4. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories. (Bul. 160.)
  - No. 5. Summary of the report on condition of woman and child wage earners in the United States. (Bul. 175.)
  - No. 6. Effect of minimum-wage determinations in Oregon. (Bul. 176.)
  - No. 7. The boot and shoe industry in Massachusetts as a vocation for women. (Bul. 180.)
  - No. 8. Unemployment among women in department and other retail stores of Boston, Mass. (Bul. 182.)
  - No. 9. Dressmaking as a trade for women. (Bul. 193.)
- For material relating to this subject, but not included in this series, see Miscellaneous series, Nos. 2, 3, 8 (Buls. 117, 118, 167).

### Workmen's Insurance and Compensation (including laws relating thereto).

- No. 1. Care of tuberculous wage earners in Germany. (Bul. 101.)
- No. 2. British National Insurance Act, 1911. (Bul. 102.)
- No. 3. Sickness and accident insurance law of Switzerland. (Bul. 103.)
- No. 4. Law relating to insurance of salaried employees in Germany. (Bul. 107.)
- No. 5. Workmen's compensation laws of the United States and foreign countries. (Bul. 126.)
- No. 6. Compensation for accidents to employees of the United States. (Bul. 155.)
- No. 7. Compensation legislation of 1914 and 1915. (Bul. 185.)
- No. 8. Compensation laws of the United States and foreign countries. (Bul. 203.) [In press.]
- No. 9. Proceedings of the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions. (Bul. 210.) [In press.]
- No. 10. Proceedings of the Conference on Social Insurance called by the International Association of Industrial Accident Boards and Commissions, December 5 to 9, 1916. Washington, D. C. (Bul. 212.) [In press.]

### Industrial Accidents and Hygiene.

- No. 1. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories. (Bul. 104.)
- No. 2. Hygiene of the painters' trade. (Bul. 120.)
- No. 3. Dangers to workers from dusts and fumes, and methods of protection. (Bul. 127.)
- No. 4. Lead poisoning in the smelting and refining of lead. (Bul. 141.)
- No. 5. Industrial accident statistics. (Bul. 157.)
- No. 6. Lead poisoning in the manufacture of storage batteries. (Bul. 165.)
- No. 7. Industrial poisons used in the rubber industry. (Bul. 179.)
- No. 8. Report of British departmental committee on danger in the use of lead in the painting of buildings. (Bul. 188.)
- No. 9. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. (Bul. 201.) [Limited edition.]
- No. 10. Anthrax as an occupational disease. (Bul. 205.) [In press.]
- No. 11. Causes of death by occupations. (Bul. 207.) [In press.]
- No. 12. Hygiene of the printing trades. (Bul. 209.) [In press.]

### Conciliation and Arbitration (including strikes and lockouts).

- No. 1. Conciliation and arbitration in the building trades of Greater New York. (Bul. 124.)
- No. 2. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements. (Bul. 133.)
- No. 3. Michigan copper district strike. (Bul. 139.)
- No. 4. Industrial court of the cloak, suit, and skirt industry of New York City. (Bul. 144.)
- No. 5. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City. (Bul. 145.)
- No. 6. Collective bargaining in the anthracite coal industry. (Bul. 191.)
- No. 7. Collective agreements in the men's clothing industry. (Bul. 198.)



## MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

### **Labor Laws of the United States (including decisions of courts relating to labor).**

- No. 1. Labor legislation of 1912. (Bul. 111.)
- No. 2. Decisions of courts and opinions affecting labor, 1912. (Bul. 112.)
- No. 3. Labor laws of the United States, with decisions of courts relating thereto. (Bul. 148.)
- No. 4. Decisions of courts and opinions affecting labor, 1913. (Bul. 152.)
- No. 5. Labor legislation of 1914. (Bul. 166.)
- No. 6. Decisions of courts affecting labor, 1914. (Bul. 169.)
- No. 7. Labor legislation of 1915. (Bul. 186.)
- No. 8. Decisions of courts affecting labor, 1915. (Bul. 189.)
- No. 9. Labor laws and their administration in the Pacific States. (Bul. 211.) [In press.]
- No. 10. Labor legislation of 1916. (Bul. 213.) [In press.]

### **Foreign Labor Laws.**

- No. 1. Administration of labor laws and factory inspection in certain European countries. (Bul. 142.)

### **Vocational Education.**

- No. 1. Vocational education survey of Minneapolis. (Bul. 199.) [In press.]

For material relating to this subject, but not included in this series, see Wages and hours of labor series, No. 9 (Bul. 147); Conciliation and arbitration series, No. 5 (Bul. 145); Miscellaneous series, Nos. 6, 7 (Buls. 159, 162).

### **Miscellaneous Series.**

- No. 1. Statistics of unemployment and the work of employment offices. (Bul. 109.)
- No. 2. Prohibition of nightwork of young persons. (Bul. 117.)
- No. 3. Ten-hour maximum working-day for women and young persons. (Bul. 118.)
- No. 4. Employers' welfare work. (Bul. 123.)
- No. 5. Government aid to home owning and housing of working people in foreign countries. (Bul. 158.)
- No. 6. Short-unit courses for wage earners and a factory school experiment. (Bul. 159.)
- No. 7. Vocational education survey of Richmond, Va. (Bul. 162.)
- No. 8. Minimum-wage legislation in the United States and foreign countries. (Bul. 167.)
- No. 9. Foreign food prices as affected by the war. (Bul. 170.)
- No. 10. Unemployment in New York City, N. Y. (Bul. 172.)
- No. 11. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915. (Bul. 174.)
- No. 12. Regularity of employment in the women's ready-to-wear garment industries. (Bul. 183.)
- No. 13. Profit sharing in the United States. (Bul. 208.) [In press.]

